DOCUMENT RESUME

ED 469 641 HE 035 358

TITLE	Post-Secondary Transitions in Alberta: Educational Outcomes of 1999/2000 Grade 12 Students.
INSTITUTION	Alberta Learning, Edmonton.
ISSN	ISSN-1499-1381
PUB DATE	2002-00-00
NOTE	69p.; Produced by Information Strategic Services and Alberta Council on Admissions and Transfer.
AVAILABLE FROM	For full text: http://www.learning.gov.ab.ca/ei/publications/acat_report_final2000.pdf.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC03 Plus Postage.
DESCRIPTORS	*College Admission; College Students; Foreign Countries; *High School Graduates; High Schools; Higher Education; Sex Differences; *Student Characteristics
IDENTIFIERS	*Alberta

ABSTRACT

This document analyzes and reports on the 1999-2000 grade 12 cohort entering Alberta postsecondary institutions in the fall of 2000. Almost 75% of all applications by grade 12 students to postsecondary institutions in the province resulted in offers of admissions for the 2000-2001 school year, and more than three-quarters of these offers were accepted. In total, 70% of individual students who submitted an application went on to attend one of Alberta's postsecondary institutions in the fall of 2000. The report also presents characteristics of grade 12 students entering postsecondary institutions on a delayed basis in fall 2000. Approximately 28% of all grade 12 students registered in the 1999-2000 school year entered a postsecondary institution in Alberta in fall 2000. Females outnumbered males; 31% of females entered postsecondary institutions, while only 25% of male students did so. Students who entered postsecondary education had accumulated more credits and were likely to have higher academic averages. Data are given to show the geographic representations of students from Alberta and the characteristics of delayed entry students. (Contains 19 tables.) (SLD)

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Post - Secondary Transitions in Alberta

Educational Outcomes of 1999/2000 Grade 12 Students

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This document was produced by:

Information Services
Information and Strategic Services
Alberta Learning
Floor 7, East Tower, Devonian Building
11160 Jasper Avenue
Edmonton, AB T5K 0L2

Phone: (780) 427-9510
(outside Edmonton dial toll-free 310-0000)
Fax: (780) 427-0013

Alberta Council on Admissions and Transfer
Room 909, 108 Street Building
9942 – 108 Street
Edmonton, AB T5K 2J5

Phone: (780) 422-9021
(outside Edmonton dial toll-free 310-0000)
Fax: (780) 427-0423

ISSN 1499-1381

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EXECUTIVE SUMMARY

Post-secondary education is increasingly important to effective participation in the world of work and citizenship. Educators and policy makers within Alberta Learning are therefore interested in examining the nature of the transitions that students make from high school to post-secondary programs.

This report is the outcome of continued cooperation within Alberta Learning between Information Services and the Alberta Council on Admissions and Transfer (ACAT). This document analyses and reports on the 1999/2000 grade 12 cohort entering Alberta post-secondary institutions in the fall of 2000. Almost 75% of all applications by grade 12 students to post-secondary institutions in the province resulted in offers of admission for the 2000/2001 school year and more than three-quarters of these offers of admission were accepted. In total, 70% of individual students who submitted an application went directly on to attend one of Alberta's post-secondary institutions in the fall of 2000. As with the report on the 1998/1999 grade 12 cohort, this study also presents characteristics of grade 12 students entering post-secondary institutions on a delayed basis in the fall of 2000.[1]

Comparison Between Post-Secondary Attenders and Non-Attenders

Approximately 28% of all grade 12 students registered in the 1999/2000 school year entered a post-secondary institution in Alberta in the fall of 2000.[2] Females outnumbered males: 31% of female grade 12 students moved into the post-secondary sector, while only 25% of male grade 12 students did so. The proportion of males participating in the post-secondary sector was higher than the percentage of females only at technical institutes. Younger students were more likely than older students to continue their education in the post-secondary sector. While 37% of seventeen-year-olds and 32% of eighteen-year-olds moved on to post-secondary education in the province, only 22% of nineteen-year-olds did so.

More than one in three diploma holders (36%) moved into post-secondary programs, while slightly more than one in ten (12%) non-diploma holders participated in post-secondary education. Attenders had also, on average, earned more credits (113) than non-attenders (96). Students who attended post-secondary programs had a higher overall grade 12 average (73%) than those students who did not attend (66%). Over 50% of grade 12 students who moved into the post-secondary sector had successfully completed Language Arts 30 (82%), Social Studies 30 (72%) and Mathematics 30 (68%). Less than 50% of students who did not move on had successfully completed language Arts 30 (43%), Social Studies 30 (33%), and Mathematics 30 (23%).

Academic Characteristics of Students Entering Post-Secondary Institutions

The diploma status of students attending post-secondary programs varied significantly by sector. Over 92% of students entering the university sector held a diploma while 79% of students

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1 In this report, the term "delayed entry students" is used to denote only those students who apply to the post-secondary system after being out of the K-12 system for one complete school year. Students entering after more than a one year interruption are not included.

2 It is worth noting that each year, a significant number of Alberta grade 12 students enter post-secondary studies at institutions outside Alberta.

attending public colleges had done so. Students who entered the university sector had, on average, accumulated 124 credits. This was higher than the average number of credits for students at the private university colleges (119 credits), the established public colleges (117 credits), the private colleges (116 credits), the technical institutes (115 credits), and those institutions that have become public colleges since 1997 (113 credits).

There was a gap of at least six percentage points between the overall grade 12 average for students entering the university sector (78%) and the remaining sector averages which clustered around 70%. Students in the university sector performed substantially better in all 30-level core courses than their counterparts in other sectors. The university sector average in Mathematics 30 of 76% was significantly higher than the remaining sector averages which ranged from 58% to 65%. The average grade in Mathematics 30 for students in the university sector as whole was slightly higher than averages in Language Arts 30 and Social Studies 30. In all other sectors, the average grade in Mathematics 30 was lower than average grades in Language Arts 30 and Social Studies 30.

Eighty-five percent of grade 12 students entering post-secondary institutions had credit in Mathematics 30 or 33, whereas significantly more students had passed Social Studies 30 or 33 (90%) and Language Arts 30 or 33 (95%).

Jurisdictional and Geographical Origin of New Post-Secondary Students

Regions varied in the percentage of their students who enrolled directly in the post-secondary learning system. At the jurisdictional level, about one-fifth of all students and one-third of diploma holders from the northern and central regions of the province enrolled directly in Alberta's post-secondary institutions. In the southern region, 26% of all students and 31% of students with a diploma moved into the post-secondary sector. The Calgary region and the capital region had the highest proportion of students, both diploma holders and non-diploma holders, enrolled in the post-secondary system.

Francophone and Catholic jurisdictions sent proportionally more of their students to Alberta's post-secondary institutions than did non-Catholic jurisdictions.

On a per-capita student basis, census divisions in southeastern Alberta (No. 1 Medicine Hat, No. 2 Lethbridge, and No. 4 Hanna) had the highest rate of post-secondary attendance.

Characteristics of Delayed Entry Students from the 1998/1999 Grade 12 Cohort

Thirty percent of 1998/1999 grade 12 students proceeded directly to post-secondary institutions in the fall of 1999, and an additional 4.7% of this cohort entered the post-secondary system on a delayed basis in the fall of 2000.

Grade 12 students who delayed entry into the post-secondary sector for one year were distinctive in several ways compared with students who proceeded directly from high school. For example, only 15% of students proceeding directly from grade 12 in 1999 were without a diploma, compared with 25% for those who delayed entry until 2000. Students delaying entry had fewer credits and lower course averages than students who proceeded directly.

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1. INTRODUCTION

1.1 Overview

This report profiles students who were registered in grade 12 courses in Alberta in the 1999/2000 school year and who continued to post-secondary institutions in the province in the fall of 2000. It therefore offers a unique perspective on a transition that greater numbers of Albertans are making than ever before – the transition from high school to post-secondary education.[3] Studying these transitions offers policy makers in both the secondary and post-secondary sectors a significant opportunity to evaluate education policy and curriculum and work toward Alberta Learning's goal of creating an integrated learning system.

1.2 Why Study Transitions to Post-Secondary Programs?

One of Alberta Learning's key goals is that learners be well prepared for lifelong learning, the world of work and citizenship. Possessing post-secondary credentials is increasingly critical to achieving this goal as individuals with higher levels of educational attainment are generally found in higher levels of employment and benefit from increased earnings.[4]

Since 1994, credit program enrolment at Alberta's publicly funded post-secondary institutions has grown by five percentage points, outstripping population growth almost five-fold.[5] Alberta Learning predicts total enrolment growth for Alberta's post-secondary institutions will range between 11% and 15% for the next five-year period.[6]

In any given year, students from Alberta's K-12 learning system make up the majority of post-secondary admissions in the province. Tracking student achievement and transition into the post-secondary sector offers educators and policy makers within Alberta Learning the opportunity for more informed decision-making.

1.3 Background: What Makes this Report Unique?

Until recently there has been little definitive transition data pertaining to all students in Alberta. Attempts to follow the progress of Alberta students throughout the learning system have been thwarted by the fact that it has not been possible to link K-12 student data to post-secondary data.

This situation changed in the mid-1990s with the initiation of a data-sharing project between Alberta Learning (formerly Alberta Education) and the Alberta Council on Admissions and Transfer (ACAT)[7]. In February 1992 ACAT had introduced the Duplicate Application Detection project (DAD) which enabled the ACAT Office to determine the extent of duplicate applications between institutions. This resulted in the development of a database containing application data for individuals applying to Alberta's public post-secondary institutions for September admission. In 1995, ACAT and Alberta Learning (then Alberta Education) collaborated on a pilot project

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3 Alberta Learning, Learner Enrolment and Reporting System (LERS).

4 See Alberta Learning, Adult Learning Division, *Profile of Alberta's Adult Learning System: A Context for Discussion*, January 2002, pp. 2-3 for a further discussion of the links between educational attainment and labour market outcome.

5 Alberta Learning, Learner Enrolment Reporting System (LERS); Statistics Canada, *Annual Demographic Statistics, 2000*, Catalogue 91-213-XPB, p.21.

6 Unpublished enrolment forecast, Alberta Learning, March 2001.

7 Alberta Council on Admissions and Transfer is now part of Alberta Learning

matching application data for individuals applying to Alberta's public post-secondary institutions with secondary student records from the Alberta Learning Corporate Data Warehouse.

Based on this data exchange, Information Services has since 1997 released a series of annual reports entitled *Post-Secondary Transitions in Alberta*. These reports examine the characteristics of Alberta students who have entered post-secondary institutions in the province. For the first time, the Ministry could now link high school students' academic and demographic characteristics to their entry into the post-secondary sector.

1.4 Overview of Report

As in previous years, the primary focus of this report remains the demographic and academic characteristics of Alberta's Grade 12 students who have directly continued their studies at post-secondary institutions in the province. In order to provide a rich context for interpretation, this report offers analysis of the data from a number of perspectives:

- **Section Two** asks **WHO** moves on to post-secondary programs in the province. It first describes the grade 12 cohort which forms the basis of this study and then summarizes the demographic and academic characteristics of those students who have moved directly into the post-secondary sector. It also compares those grade 12 students who moved on and those who did not. This information is relevant to issues of post-secondary access since it identifies target groups who are less likely to continue their education at the post-secondary level.

- **Sections Three** through **Section Seven** ask the question **WHICH** post-secondary institutions did students from the grade 12 cohort attend. All data are presented at the institutional and sectoral level. **Section Three** examines application patterns, offers of admission, and finally, attendance at post-secondary institutions. It offers insight into the transition process itself, as well as the range and diversity of Alberta's post-secondary institutions.

- **Section Four** asks how demographic characteristics such as gender and age are reflected in patterns of post-secondary attendance at the sectoral and institutional level.

- **Section Five** is the first of three sections describing the academic characteristics of continuing students at each institution monitored in this report. **Section Five** documents the diploma status of students entering post-secondary programs and presents related data on the number of credits awarded and, where appropriate, the number of years taken to earn the diploma.

- **Section Six** further explores the academic characteristics of new post-secondary students by presenting data on the grade 12 academic performance of students attending post-secondary institutions.

- **Section Seven** concludes the description of academic characteristics with an examination of patterns of core grade 12 course completions.

- **Section Eight** asks **WHERE,** or from which area of the province, do post-secondary students originate. Data is presented on the rates of continuation by jurisdiction and geographic location

- **Section Nine** addresses the question of **WHEN** students move on to post-secondary education by describing patterns of post-secondary attendance among delayed entry students from the 1998/1999 grade 12 cohort. This data offers a comparison of learners who choose to make a delayed transition from secondary to post-secondary education[8] with those who do not.

- **Section Ten** includes more detailed information on the methodological issues that underpin this report.

[8] In this report, the term "delayed entry students" is used only to denote those students who apply to the post-secondary system after being out of the K-12 system for one complete school year. This report presents only a partial picture of delayed entry students—students entering after more than a one-year interruption are not included.

2. THE GRADE 12 COHORT: WHO MOVES ON TO POST-SECONDARY PROGRAMS?

2.1 Overview

This section presents the results of analyses determining the rates of post-secondary participation among the total population of grade 12 students in Alberta considered potential applicants to the post-secondary sector. This cohort of 51,009 students consists of all students who were registered in at least one grade 12 course in the 1999/2000 school year.[9] Such a definition allows for the inclusion of students who move directly on to post-secondary education after intensive involvement in secondary education as well as students who may be accessing post-secondary education after only a partial return to the secondary system. It thus enables the study to capture the increasing diversity of Albertans who seek post-secondary education.

2.2 The Grade 12 Cohort: Post-Secondary Attendance

Figure 1 shows that 28% of all 1999/2000 grade 12 students in the province attended a post-secondary institution in the fall of 2000. Although the absolute numbers of both grade 12 students and post-secondary entrants have increased steadily over the past four years, the proportion of the grade 12 cohort moving into the post-secondary programs has remained fairly constant.

Figure 1 also shows the attendance rates based on diploma status. Sixty-seven percent of all grade 12 students obtained a diploma. Of those with a diploma, 36% moved into the post-secondary sector. By way of contrast, only 12% of those without a diploma entered post-secondary institutions. This is consistent with data from the previous three years which show that diploma holders have moved directly on to post-secondary education in Alberta at a rate at least three times that of students who have not obtained a diploma.[10]

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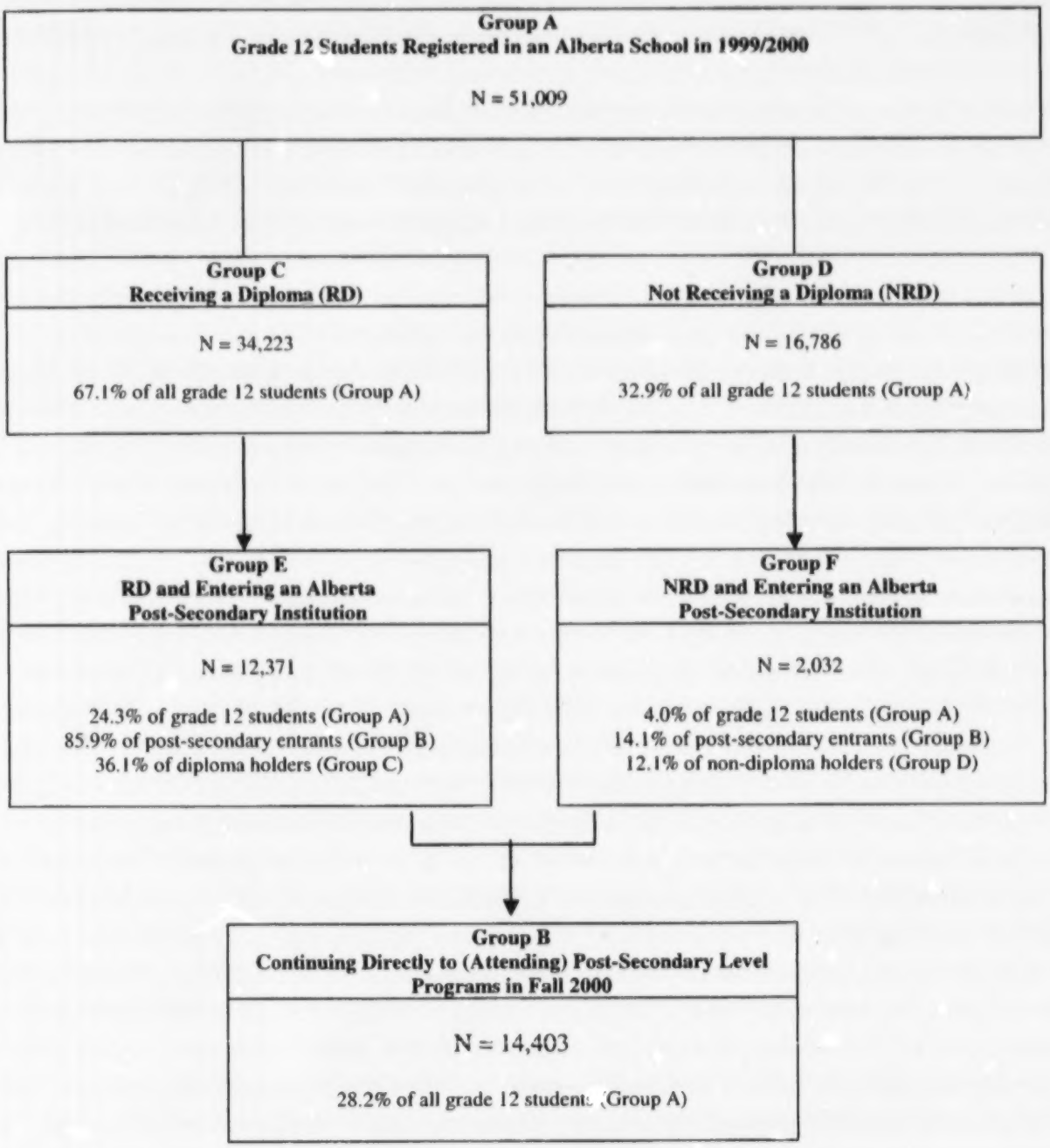
[9] Includes all students registered in grade 12 in an Alberta school in the 1999/2000 school year (60,575), minus all non-diploma holders who returned to register in the K-12 system again in the 2000/2001 school year and who did not apply to an Alberta post-secondary institution (9,566) for a total of 51,009.

[10] In 1997, 37.4% of students holding a diploma attended post-secondary institutions in the province. In 1998 and 1999 the percentage was 37.0%. In 1997 10.3% of students without a diploma entered post-secondary programs in the province while the percentage was 10.1% in 1998 and 13.0% in 1999.

Figure 1
Diploma Status[11] and Post-Secondary Registrations of 1999/2000 Alberta Grade 12 Students[12]


Group A
Grade 12 Students Registered in an Alberta School in 1999/2000
N = 51,009
Group C
Receiving a Diploma (RD)
N = 34,223
67.1% of all grade 12 students (Group A)
Group D
Not Receiving a Diploma (NRD)
N = 16,786
32.9% of all grade 12 students (Group A)
Group E
RD and Entering an Alberta Post-Secondary Institution
N = 12,371
24.3% of grade 12 students (Group A)
85.9% of post-secondary entrants (Group B)
36.1% of diploma holders (Group C)
Group F
NRD and Entering an Alberta Post-Secondary Institution
N = 2,032
4.0% of grade 12 students (Group A)
14.1% of post-secondary entrants (Group B)
12.1% of non-diploma holders (Group D)
Group B
Continuing Directly to (Attending) Post-Secondary Level Programs in Fall 2000
N = 14,403
28.2% of all grade 12 students (Group A)

[11] Includes students receiving an Alberta High School Diploma or a High School Equivalency Diploma.

[12] The grade 12 cohort for any given year includes all students registered in a grade 12 course in the province minus all non-diploma holders who return to register in the K-12 system again in the following school year and have not applied to an Alberta post-secondary institution.

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2.3 Comparison Between Post-Secondary Attenders and Non-Attenders: Gender

Students from a variety of backgrounds enter the post-secondary system. Hence, it is useful to examine the characteristics of those who attend a post-secondary institution and compare them with those grade 12 students who do not continue their education at the post-secondary level.

Table 1 presents data on the proportions of males and females among those students from the grade 12 cohort who attended post-secondary institutions and those who did not. The gender ratio among the pool of all grade 12 students was 51% female to 49% male.[13] Of the female students in this cohort, 31% went on to attend post-secondary institutions in the province while a lower proportion of male students attended post-secondary institutions (25%). This in part explains the gender ratio among those attending post-secondary institutions in the province in the fall of 2000: 57% of students were female while 43% were male. These findings support other research showing the gains made in female representation in the post-secondary system in recent years.[14]

As discussed in Section 2.2, 36% of students with diplomas moved into the post-secondary sector, while 12% of students who had not obtained a diploma did so. Female diploma holders attended at a rate six percentage points higher than male diploma holders, while female non-diploma holders also attended post-secondary institutions at a higher rate (15%) than male non-diploma holders (10%).

Table 1
Post-Secondary Attendance by Gender and Diploma Status

	Entire Grade 12 Cohort		Diploma Holders		Non-Diploma Holders	
	Total	% Applying	Total	% Applying	Total	% Applying
Gender						
Female	26140	31	18060	39	1175	15
Male	24869	25	16163	33	857	10
Total	**51009**	**28**	**34223**	**36**	**2032**	**12**

Participation in post-secondary education is a function of a variety of factors – among them the admission requirements at various institutions, the qualifications of applicants and the accessibility of education.[15] Due to the nature of the data, many of these factors are beyond the scope of this report. However, attendance at a post-secondary institution is not possible without a student expressing the intention to pursue post-secondary studies by initiating the application process. Because the DAD data is uniquely suited to track applications, this report can therefore document gendered patterns in the rates of application to post-secondary education.

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[13] A higher proportion of female students than male students complete high school, in part due to the fact that more males than females leave the K-12 system. For a more detailed discussion see Statistics Canada and Council of Ministers of Education, Canada, *Education Indicators in Canada*, February 2000, Catalogue 81-229-XPB, p.5

[14] Statistics Canada, *The Daily*, November 8, 2001, Catalogue No. 11-001E.

[15] For a discussion of the range of factors affecting post-secondary participation in Alberta see Alberta Learning, *Post-Secondary Accessibility Study*, April 2001.

As can be seen in Table 2, males and females applied to post-secondary institutions at different rates. Of the 26,140 female students in the grade 12 cohort, 45% applied to post-secondary institutions while only 36% of the 24,869 male members of the grade 12 cohort did so. Males and females were offered admission at the same rate: overall, 81% of applicants, whether male or female, received offers of admission. Of those offered admission, 86% of both males and females went on to attend post-secondary institutions. Therefore, the difference in proportion of females and males attending post-secondary education can be attributed to the difference in the rate at which females applied the post-secondary sector as well as the slight difference in gender ratio within the original grade 12 cohort.

These differences in overall rates of application and attendance for males and females are mirrored in the rates of application and attendance for both diploma holders and non-diploma holders. While 52% of female diploma holders applied to post-secondary programs in the province, only 45% of males did so. Male and female diploma holders were offered admission at the same rate (83%), and accepted offers of admission at the same rate (87%).

In the case of non-diploma holders, 23% of all students applied to the post-secondary sector. However, 28% of all female non-diploma holders applied to enter the post-secondary sector, while 18% of male non-diploma holders did so. Once again the rates of offers of admission and acceptance were similar between males and females. As a result, as was shown in Table 1 above, 15% of female non-diploma holders attended post-secondary, while only 10% of male non-diploma holders entered the post-secondary system.

Table 2
Post-Secondary Application Patterns by Gender and Diploma Status

	Entire Grade 12 Cohort		Diploma Holders		Non-Diploma Holders	
	Total	% Applying	Total	% Applying	Total	% Applying
Gender						
Female	26140	45	18060	52	8080	28
Male	24869	36	16163	45	8706	18
Total	**51009**	**40**	**34223**	**49**	**16786**	**23**

2.4 Comparison Between Post-Secondary Attenders and Non-Attenders: Age

Age, as determined in the data used for this study, is based on the age of the student as of September 1, 2000. Based on the normal age of entry into grade 1, it is to be expected that most attenders at post-secondary institutions in the province who have entered directly after high school would be either seventeen or eighteen years of age as of September 1, 2000. As can be seen in Table 3, the age groups having the largest proportion of attenders were indeed 17 and 18-year-olds: 37% of seventeen-year-olds and 32% of eighteen-year-olds moved directly into the post-secondary sector after leaving the K-12 system. Students younger than seventeen years of age went on to post-secondary education at a somewhat lower rate (24%). High school students 19 years of age and over were less likely, on average, to have continued their education in the post-secondary system.

Table 3
Post-Secondary Attendance Status by Age

Age	Total	%Attending	% Not Attending
<17	79	24	76
17	7262	37	63
18	22734	32	68
19	9982	22	78
20	4310	18	82
21	1392	21	79
22-24	1969	22	78
25+	3281	21	79
Total	**51009**	**28**	**72**

2.5 Comparison of Attenders and Non-Attenders: Academic Characteristics

Table 4 presents data on the percentage of attenders and non-attenders who had attained a pass in Language Arts 30, Social Studies 30 or Mathematics 30 prior to entry into the post-secondary system. Lack of a pass in any of these courses could be the result of either the student having taken the course and failing, or the student not having taken the course at all. The data simply records success in a particular course.

Taking each course individually, the majority of students attending post-secondary institutions had taken and passed these 30-level courses, while non-attending students who had chosen to take the course and gone on to attain a passing grade were in a minority. The proportion of students attending post-secondary institutions who had passed Language Arts 30 was 82%, while 72% of attending students had passed Social Studies 30 and 68% had passed Mathematics 30. In the case of non-attenders, 43% had taken and passed Language Arts 30, and 33% had successfully completed Social Studies 30. By comparison, only 23% of non-attenders had successfully completed Mathematics 30.

Substantially more of the students moving into the post-secondary sector had taken Language Arts 30 than had taken Mathematics 30.[16] Nonetheless, it can be argued that successfully completing Mathematics 30 is a powerful predictor of a student moving into post-secondary institutions. As can be seen in Table 4, the largest difference in pass rate between attending and non-attending students is to be found in Mathematics 30. There is a 45 percentage point difference in the rate at which attenders and non-attenders took and passed Mathematics 30 compared to a 39 percentage point difference in the rate at which the same groups successfully completed Language Arts 30 and Social Studies 30.

While a student who completed Language Arts 30 or Social Studies 30 was more likely to be attending a post-secondary institution than the average grade 12 student, successful completion of these courses was a weaker predictor of attendance than successful completion of Mathematics 30.

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[16] This is to be expected given that Language Arts 30 is the most widely requested requirement for admission into post-secondary institutions across the province.

Table 4
Percent of Attending and Non-Attending 1999/2000 Grade 12 Students Passing Core 30 Level Courses

Course	% Attenders Passing	% Non-Attenders Passing
Language Arts 30	82	43
Social Studies 30	72	33
Mathematics 30	68	23

Table 5 presents the mean grade 12 average, mean credits earned and mean years taken to earn a diploma for those attending a post-secondary institution and those who did not continue their post-secondary education in the 1999/2000 school year. As we would expect, grade 12 students who were attending a post-secondary institution had achieved a higher high school average and had earned more credits than non-attenders.

Table 5
Post-Secondary Attendance Status of 1999/2000 Grade 12 Students by Mean Grade 12 Average, Credits Earned, and Years to Earn Diploma[17]

	All Students N=51,009	Students Attending N=14,403	Students Not Attending N=36,606
Mean Grade 12 Average	68.7	73.0	66.5
Mean Credits Earned	102	113	96
	All Diploma Holders N= 33,859	**Diploma Holders Attending N=12,315**	**Diploma Holders Not Attending N= 21,544**
Mean Years to Earn Diploma	3.1	3.1	3.2

The results presented in Table 4 and Table 5 point to a strong relationship between grade 12 academic achievement and the likelihood of a student attending a post-secondary institution. Nevertheless, as previously noted, there are other non-academic reasons why some grade 12 students do not attend a post-secondary institution.[18]

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[17] Based on students receiving an Alberta High School Diploma only. This is calculated based on the difference between the year and month the student started grade 10 and the year and month they earned their diploma.

[18] For a discussion of non-academic factors affecting post-secondary participation in Alberta see Alberta Learning, *Post-Secondary Accessibility Study*, March 2001.

3. PATTERNS OF POST-SECONDARY ATTENDANCE BY INSTITUTION

3.1 Overview

This is the first of three sections presenting the results of analyses of the transition process using data based on *the number of students attending each post-secondary institution*. Totals therefore may include multiple counts of students who attend at more than one institution. As a result, the totals in this section of the report may not be the same as the totals presented earlier on in the analysis of data on the individuals who make up the grade 12 cohort. This section examines patterns of offers of admission by post-secondary institutions, as well as patterns of acceptance of these offers and eventual attendance.

3.2 The Nature of the Data

The DAD data include information on the institution or institutions applied to by the student, whether the student is offered admission by an institution, and whether the student accepts an offer of admission and attends a post-secondary institution in the province. This allows us to see each stage of the transition process and assess the complexities involved in entering a particular institution (see the section titled "The complexity of the post-secondary application process" in the last section of this report for a more detailed review of the stages involved in the application process).

3.3 Overall Rates of Offers of Admission and Attendance at Post-Secondary Institutions

Table 6 presents the percentage of grade 12 applicants who were offered admission to, and attended, post-secondary institutions in the province. Seventy-three percent of all applicants received offers of admission. Of these students, 77% went on to attend at those institutions which had offered them admission.[19] The data show that 56% of all applications made to post-secondary institutions by grade 12 Alberta students resulted in both an offer of admission by the institution and subsequent attendance at that same institution by the applicant in the fall of 2000. It is important to reiterate that because students can and do apply to more than one institution, the ratio of attendance to application is necessarily different than the number of individual attenders to individual applicants. As noted above, over half (56%) of all *applications* resulted in attendance at post-secondary institutions in the province.[20] However 70% of all *students* submitting an application went directly on to attend one of Alberta's post-secondary institutions.

3.4 Offers of Admission by Sector and Institution

Institutional sectors varied considerably in the rate at which they offered admission to applicants. For instance, in the university sector, the great majority of applications led to offers of admission: 70% to 89% of all applications to Alberta's three residential universities and 100% of applications to Athabasca University resulted in offers of admission. At the private colleges, offers were made to almost the entire applicant pool. In the public college sector, 64% of all

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[19] In the *1998/1999 Transitions Report*, the percentage of applicants offered admission was 70%, while 81% of those offered admission went on to attend post-secondary institutions. Thus the 1999/2000 figures show a slight rise in the rate at which applicants were offered admission and a slight decline in the rate at which those students offered admission attended. In the 1996/1997 and 1997/1998 reports the respective rates for both cohort years were 69% and 83%.

[20] This is identical to the rate found in the *1998/1999 Transitions Report*.

applications resulted in offers of admission while 68% of applications to technical institutes led to offers of admission.

The least amount of variation in rates of offers of admission among institutions comprising distinct sectors occurred in the technical institutes and the private colleges sectors. Just over two-thirds of applicants to NAIT and SAIT were successful in obtaining offers of admission, while offers were made to almost the entire pool of private college applicants.

The greatest degree of variation in the rate of offers of admission between institutions occurred among the institutions comprising the established public colleges sector. Only 39% of applicants at Olds College were offered admission, and just over half the applicants (52%) to Mount Royal College and Grant MacEwan College were offered admission. Conversely, at three of the public colleges – Grande Prairie Regional College, Red Deer College and Medicine Hat College – at least 90% of applicants were offered admission.

Over the past four years, the overall rates of offers of admission to grade 12 applicants have remained quite stable. However, there has been fluctuation over time at the sectoral level. In the university sector, rates of offers of admission dropped from a high of 79% in 1996/1997 to a low of 74% in 1998/1999 prior to returning to the present rate of 81%. This is primarily a reflection of fluctuations in the rate of offers of admission at the University of Alberta which is the institution with the largest enrolment in the sector. There has also been a modest but consistent rise in rates of offers of admission from the public colleges. However, while at some of these institutions the rates of offers of admission have remained remarkably stable over four years of studies – for instance Mount Royal College has offered admission in response to just over half of applications in all four years of the study – others, such as Olds College, have fluctuated more dramatically. For instance, at Olds College approximately 80% of applicants in both the 1996/1997 and 1997/1998 cohorts received offers of admission while only 39% of the 1999/2000 cohort did so.

3.5 Student Acceptance and Attendance

The data also permit an examination of the relationship between being offered admission to a program and attending at that institution. That is, not all students who are offered admission will accept the offer and move on to register at that institution. In one respect, therefore, these figures are measures of the degree of interest applicants have in attending that particular institution or institutional sector. Thus, the data suggest that universities and private colleges are the most desirable institutions with attendance by those offered admission close to 80%. In any given sector, the rate of attendance by Alberta students offered admission did not fall below 72%. In total, 77% of all Alberta students attended provincial post-secondary institutions from which they had received offers, suggesting a fair degree of interest on the part of applicants in attending Alberta's post-secondary programs.

As with the rates of offers of admission, there is a fair degree of variability in the proportion of students offered admission who actually attended. At the universities, 74% of those offered admission to the University of Lethbridge went on to register, whereas 92% of those offered admission at Athabasca University registered at that institution resulting in an overall rate of 79% for the university sector. The overall ratio within the university sector of students attending to those students offered admission was 79%. The public colleges show even greater variation. Everyone offered admission to Alberta College of Art & Design eventually registered, as well as

the vast majority of applicants offered admission to Fairview College (96%). However only 64% of those offered admission at Red Deer College registered at that institution.

3.6 Interpreting the Data

The relationship between the 'offered admission' rate and the 'attendance' rate is weak. Institutions with similar rates of attendance by applicants often have quite drastically differing rates of offers of admission and rates of acceptance, by applicants, of those offers. As a result, knowledge of how many applicants are offered admission is therefore little help in predicting the actual attendance rate for an individual institution.

There are numerous possible explanations for differing rates of admission. Institutions with low proportions of offers relative to the number of applications may have such high demand relative to their capacity that they need to raise their entry standards to control student numbers. An alternative explanation may be that these institutions with low proportions of offers may be receiving unusually high proportions of applications from applicants who are not qualified to attend and, consequently, cannot be offered admission. Conversely, institutions with high proportions of offers may have excess capacity relative to application numbers and may therefore be able to be more liberal with their offers. Or it could be that they attract only appropriately qualified applicants, and consequently can offer a higher proportion of these applicants admission.

In an evaluation study of the DAD database, Andrew Barnard studied this sequence of activities leading from application to attendance.[21] He astutely pointed out that the available data does not allow us to draw conclusions about the relationship between rates of application and rates of attendance because crucial information regarding both the "quality" of the applicant and the relevant institutional policies, procedures, standards are not readily available.[22] Therefore, comparisons between institutions can only be made with caution.

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[21] Andrew A. Barnard. 1995. *A Description and Analysis of the Duplicate Application Detection (DAD) Database for the Years 1992, 1993 and 1994.* Edmonton: Andrew Barnard Consulting, p. 11.

[22] The ACAT data does include information on whether a student was deemed qualified for the program to which the student applied. This information is only available for students applying to the three residential universities.

Table 6
Grade 12 Students Offered Admission and Attending Post-Secondary Institutions

Institution	% of Applicants Offered Admission	% of Applicants Offered Admission Attending	% of All Applicants Attending
Universities			
Athabasca University	100	92	92
University of Alberta	89	74	65
University of Calgary	70	89	62
University of Lethbridge	87	74	65
Universities Total	**81**	**79**	**64**
Private University Colleges			
Augustana University College	86	70	60
Canadian University College	100	100	100
Concordia University College of Alberta	79	72	57
The King's University College	91	68	61
Private University Colleges	**84**	**72**	**60**
Public Colleges			
Alberta College of Art & Design	59	100	59
Fairview College	57	96	55
Grande Prairie Regional College	100	69	69
Grant MacEwan College Community College	51	79	40
Keyano College	82	86	70
Lakeland College	71	83	59
Lethbridge Community College	79	84	67
Medicine Hat College	89	76	68
Mount Royal College	52	71	37
Olds College	39	68	27
Red Deer College	95	64	61
Sub-Total	***64***	***75***	***48***
Public Colleges Since 1997			
Alberta College-Edmonton	100	82	82
Bow Valley College	63	78	49
NorQuest College	97	83	81
Northern Lakes College	67	58	39
Portage College	94	67	63
Sub-Total Public Colleges Since 1997	***83***	***77***	***63***
Public Colleges Total	**66**	**75**	**50**
Private Colleges			
Nazarene University College	100	100	100
North American Baptist College	97	91	89
St. Mary's College	100	68	68
Private Colleges Total	**99**	**78**	**77**
Technical Institutes			
NAIT	67	80	54
SAIT	70	75	53
Technical Institutes Total	**68**	**78**	**54**
TOTAL	**73**	**77**	**56**

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4. DEMOGRAPHIC CHARACTERISTICS OF NEW POST-SECONDARY STUDENTS

4.1 Overview

This section presents data on selected demographic characteristics of new post-secondary students for each of the institutions followed in this report. It is important to remember that these data are based on the number of students attending by institution: totals may include multiple counts of students who attend at more than one institution.

4.2 Gender

Several studies in recent years have documented the gains made by females in post-secondary enrolment.[23] Alberta is no exception. Since 1994/1995 women have comprised more than half of all students enrolled in Alberta's publicly funded post-secondary credit programs. [24]

Table 7 presents the gender breakdown, by institution, of grade 12 students continuing on to post-secondary education directly from high school at the start of the academic year 2000/2001. With the exception of both NAIT and SAIT, females outnumbered males at all Alberta post-secondary institutions. Looking at the system total, 57% of all attending students were female. This rate is consistent with percentages reported in the last three transitions reports.

The extent to which females outnumbered males varied significantly by sector. Within the university sector as a whole, 55% of students were female. However there is some variation within the sector. At the province's two largest universities, the University of Alberta and the University of Calgary, 54% of attenders were female. However, at the University of Lethbridge a greater proportion of attenders (66%) were female.

The proportion of female attenders was greater in the public college sector than in the university sector. At the start of the 2000/2001 academic year, females constituted 62% of all grade 12 Alberta students enrolling at public colleges established prior to 1997. However within this sector there was a fair degree of variability by institution. For instance, the proportion of female students ranged from 56% at Keyano College to 69% at Red Deer College.

Sixty-three percent of students entering private university colleges were female, while at private colleges, the proportion of female students was slightly higher (66%). In contrast to the variability between institutions within the public colleges sector, the private university colleges and private colleges showed little variation at the institutional level. The percentage of females attending private university colleges ranged from 61% at Augustana University College to 66% at The King's University College. Within the private colleges sector, 65% of students at North American Baptist College and St. Mary's College were women compared to 71% of students at Nazarene University College.

The sector with the highest proportion of female attenders comprised those institutions which had been public colleges only since 1997: 68% of all grade 12 students moving into this sector were female. There has, in fact, been a decrease in proportion of females attending these

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[23] Statistics Canada Council of Ministers of Education, Canada, *Education Indicators in Canada*, February 2000, p. 5; Statistics Canada, *The Daily*, November 8, 2001, Catalogue No. 11-001E.

[24] Alberta Learning, Learner and Enrolment Reporting Systems (LERS).

institutions over the past four years from 75% at the start of the 1997/1998 academic year to the present 68%. In part this may be accounted for by the inclusion, starting in 1999, of Alberta College-Edmonton, which has the highest proportion of male attenders of all the institutions in this sector.[25]

As in past years, the only exception to this gendered pattern of attendance occurred in the technical institutes sector.[26] Here more males than females attend: only 42% of all grade 12 students moving into technical institutes were female and while 58% were men. The relative proportion of men to women in this sector has remained stable since 1997.

At four institutions women constituted less that 55% of the population of attenders: Northern Alberta Institute of Technology, Southern Alberta Institute of Technology, the University of Alberta and the University of Calgary.

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[25] Females constituted 75% of entrants to the sector comprising recently established public colleges in 1997, 67% in 1998, 72% in 1999 and 68% in 2000.

[26] This compares almost exactly with information on 1995 graduates reported by Statistics Canada in the publication *Applied Research Bulletin, Special Edition Summer 2001 Human Resources Development Canada.* According to this report, the number of males exceeded the number of females only in the trade/vocational sector.

Table 7
Grade 12 Students Attending Post-Secondary Institutions, by Gender

Institution	Total Attending	Females Attending	% Female Entering
Universities			
Athabasca University	106	73	69
University of Alberta	3047	1647	54
University of Calgary	2489	1335	54
University of Lethbridge	578	382	66
Universities Total	**6220**	**3437**	**55**
Private University Colleges			
Augustana University College	187	115	61
Canadian University College	37	23	62
Concordia University College of Alberta	229	146	64
The King's University College	59	39	66
Private University Colleges	**512**	**323**	**63**
Public Colleges			
Alberta College of Art & Design	79	48	61
Fairview College	52	30	58
Grande Prairie Regional College	368	234	64
Grant MacEwan College Community College	1459	891	61
Keyano College	171	96	56
Lakeland College	137	91	66
Lethbridge Community College	474	268	57
Medicine Hat College	314	193	61
Mount Royal College	974	618	63
Olds College	76	43	57
Red Deer College	745	513	69
Sub-Total	***4849***	***3025***	***62***
Public Colleges Since 1997			
Alberta College-Edmonton	280	173	62
Bow Valley College	185	130	70
NorQuest College	246	170	69
Northern Lakes College	103	85	83
Portage College	85	54	64
Sub-Total Public Colleges Since 1997	***899***	***612***	***68***
Public Colleges Total	**5748**	**3637**	**63**
Private Colleges			
Nazarene University College	17	12	71
North American Baptist College	31	20	65
St. Mary's College	60	39	65
Private Colleges Total	**108**	**71**	**66**
Technical Institutes			
NAIT	1173	490	42
SAIT	856	357	42
Technical Institutes Total	**2029**	**847**	**42**
TOTAL	**14617**	**8315**	**57**

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4.3 Age

While there is a fair amount of homogeneity in the age of grade 12 students entering post-secondary institutions, a more detailed analysis reveals interesting differences among the various sectors.

Table 8 presents the average age of grade 12 students entering post-secondary institutions directly from high school as well as the standard deviation in age. The standard deviation (SD)[27] measures dispersion around the mean or average, thus providing important contextual information about the variability of the age of the student population for each institution. Two institutions can have identical averages for the age of attending students, but different standard deviations. For instance, the average age in 1999/2000 for grade 12 students entering both the Alberta College of Art & Design and Medicine Hat College was 18.9. However, because the standard deviation of students attending the Alberta College of Art & Design was 1.5, the ages of a larger proportion of the student population at that institution were substantially closer to the average age of 18.9 than the ages of students at Medicine Hat College where the standard deviation was 3.0.

The average age for all grade 12 students entering the post-secondary system in the fall of 2000 was 19.5 years of age. The past four years has seen a small increase in both the average age of grade 12 students entering post-secondary institutions and the extent to which these ages, as expressed by the standard deviation, have been dispersed around that average. In the fall of 1998, the average age of entrants to post-secondary programs in Alberta was 19.2, with a standard deviation of 3.2. In the fall of 2000, the average age of students moving into the post-secondary sector in Alberta was 19.5, with a standard deviation of 3.8. Not only was the average student in 2000 slightly older than the average student who had moved on to post-secondary programs in the fall of 1998, but more significantly, post-secondary students moving out of grade 12 and into the post-secondary sector in the fall of 2000 were more varied in age.

The student cohort entering those institutions which have become public colleges only since 1997 was older (average age of 24.5) and had a wider age distribution (SD of 8.2) than students entering any other sector. Looking at patterns of variation within the sector itself, there was also a significant difference in the mean age of students at Alberta College-Edmonton, where the average age of an entrant was 20.8 years, and Bow Valley College and Northern Lakes College where the average age of entrants was over 28 years.[28]

Universities and private colleges had, on average, the youngest average age of entrants (18.8). Within the university sector Athabasca University stands out with an average age of entering students (23.5) almost five years older than that of students entering Alberta's three residential universities (18.8). As well, as can be seen by the standard deviation of 7.3, Athabasca University caters to a broad age range equalled and exceeded only by the four former vocational colleges (Bow Valley College, NorQuest College, Northern Lakes College and Portage College).

Students in the public college sector were, on average, only slightly older than university students. The difference in average age between the institutions within the public college sector was also quite modest. For instance, the difference in average age between those public colleges

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[27] In a normal distribution, 68% of cases fall within one SD of the mean and 95% of cases fall within two SD.

[28] The reader is urged to use caution when interpreting findings based on a small number of students. For instance, the average age for students attending Northern Lakes College is based on only 19 students.

with the oldest average age, Grant MacEwan College Community College and Lakeland College (19.8 years) and the colleges with youngest average age, Alberta College of Art & Design and Medicine Hat College (18.9 years), is less than one year.

Important differences between institutions within this sector emerge when looking at the degree of variability in ages of those students attending each institution. If we look at the standard deviations, we find that both Lakeland College and Lethbridge Community College have standard deviations of over three and a half years, exceeding by more than a year the standard deviation at the residential universities. This indicates that they have a larger number of students both older and younger than their average. In contrast, students at Alberta College of Art & Design and Fairview College tend to cluster more closely around the average age of 18.6 as indicated by lower standard deviations of 1.5 and 1.6, respectively.

The age of students attending post-secondary programs at private university colleges and private colleges most closely resembles the age of students attending institutions within the university sector. The average age of private university college students is 19 while the average age of students at private colleges is 18.8. Students at the technical institutes are slightly older than students at the college, private colleges, and public colleges sector. The average age at NAIT and SAIT is 19.9.

4.4 Association of Age and Gender

One last question to consider is whether or not there is a particular difference in age associated with the gender of attenders. The data do suggest slight gender differences in age among students. The average age of all male students is 19.3, while the average age for females entering post-secondary programs is only modestly higher at 19.6 years of age. With the exception of colleges which have become public institutions since 1997, this modest difference is reinforced in all sectors with consistently higher standard deviations for women than for men. That is to say, the pattern for virtually all sectors as well as the system as a whole, is that female attenders are less homogeneous as to age than male attenders.

This gender pattern weakens when scrutinized by institution. An almost equal number of institutions show greater variability in men's ages. There are three institutions where the average age of male attenders is not only greater than that of females, but there is significantly greater dispersion in age: at Augustana University College, Keyano College and Medicine Hat College the standard deviations of men's ages are more than twice that of women's.

It is to be remembered that the data in Table 8 present information for all grade 12 students entering post-secondary institutions, not just grade 12 diploma-holders starting post-secondary education. Because the average age of non-graduate registrants (22.6) is four years older than the average age of graduate registrants (18.7), the average ages presented in Table 8 would all be reduced were we to include only those students holding a diploma.

Table 8
Average Age[29] and Standard Deviation of Grade 12 Students Attending Post-Secondary Institutions

Institution	Total Attending	Average Age	Standard Deviation
Universities			
Athabasca University	106	23.5	7.3
University of Alberta	3047	18.7	2.3
University of Calgary	2489	18.7	2.2
University of Lethbridge	578	18.5	1.5
Universities Total	**6220**	**18.8**	**2.4**
Private University Colleges			
Augustana University College	187	18.5	1.7
Canadian University College	37	18.7	0.7
Concordia University College of Alberta	229	19.4	3.1
The King's University College	59	18.6	0.9
Private University Colleges	**512**	**19.0**	**2.4**
Public Colleges			
Alberta College of Art & Design	79	18.9	1.5
Fairview College	52	19.3	1.6
Grande Prairie Regional College	368	19.0	2.6
Grant MacEwan College	1459	19.8	4.0
Keyano College	171	19.4	4.4
Lakeland College	137	19.8	3.8
Lethbridge Community College	474	19.5	3.7
Medicine Hat College	314	18.9	3.0
Mount Royal College	974	19.2	2.6
Olds College	76	19.6	3.0
Red Deer College	745	19.1	2.6
Sub-Total	***4849***	***19.4***	***3.3***
Public Colleges Since 1997			
Alberta College-Edmonton	280	20.8	4.7
Bow Valley College	185	28.2	9.4
NorQuest College	246	24.2	8.0
Northern Lakes College	103	28.6	8.4
Portage College	85	24.6	8.8
Sub-Total Public Colleges Since 1997	***899***	***24.5***	***8.2***
Public Colleges Total	**5748**	**20.2**	**4.8**
Private Colleges			
Nazarene University College	17	19.8	5.6
North American Baptist College	31	18.5	0.7
St. Mary's College	60	18.7	1.4
Private Colleges Total	**108**	**18.8**	**2.5**
Technical Institutes			
NAIT	1173	19.9	3.6
SAIT	856	19.8	3.7
Technical Institutes Total	**2029**	**19.9**	**3.7**
TOTAL	**14617**	**19.5**	**3.8**

[29] Calculated as of 1 September 2000.

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5. ACADEMIC CHARACTERISTICS OF NEW POST-SECONDARY STUDENTS: DIPLOMA STATUS

5.1 Overview

This section describes the academic characteristics of grade 12 Alberta students who entered post-secondary programs in the province in the fall of 2000 by asking what proportion of students at each institution and within each sector had obtained a diploma prior to entry. The analysis also asks how many years, on average, it took students to obtain the diploma and how many high school credits they had earned over the course of their studies.

5.2 Diploma Status and Post-Secondary Participation

Obtaining a diploma is often assumed to be a prerequisite to acceptance into post-secondary programs. However, a high school diploma is not in and of itself a prerequisite to post-secondary education. Entry requirements for universities, colleges and technical institutes are determined by each individual institution and do not entirely overlap with Alberta high school diploma requirements. Nonetheless, it can be argued that over the course of obtaining a diploma students also satisfy many of the requirements for admission and, as a result, there is a strong relationship between obtaining a diploma and continuing on to post-secondary education.

As can be seen in Table 9, 86% of all Alberta students entering post-secondary institutions in the fall of 2000 had obtained a diploma prior to beginning their post-secondary studies. This is consistent with data from the previous three years of the *Transition Reports*. However, this overall system average belies the extent to which the proportion of attenders holding a diploma varied by sector. Close to 92% of students entering universities from Alberta's K-12 system held a diploma, whereas, students who had obtained a diploma prior to entry were in the minority at the institutions that have only recently become public colleges (31%). Across the other sectors, 90% of students entering private university colleges held a diploma, while 87% of students attending public colleges established prior to 1997 held a diploma and 85% of students entering technical institutes had first obtained a diploma.

The impact of this marked variation in rate of attendance across the sectors must be considered in light of the relative proportions of students attending in each sector. In 2000, as in the previous years, over 40% of Alberta grade 12 students moving on to post-secondary education in the province entered programs at residential universities, making the markedly low percentage of non-diploma attenders at these institutions (8%) all the more noteworthy. Approximately 39% of all post-secondary students moving out of provincial secondary programs attended public colleges: 33% attended colleges that had been public institutions prior to 1997 and 6% attended those institutions which have become public colleges since 1997. Technical institutes accounted for 14% of post-secondary enrolment by students moving out of grade 12, while four percent of students attended private university colleges and one percent attended private colleges.

As previously mentioned, 92% of all the grade 12 students entering provincial universities in the fall of 2000 held a diploma. Of the residential universities, the University of Lethbridge consistently had the highest percentage of diploma holders attending (96.2%), while 91.5% of grade 12 students entering the University of Alberta did so after first obtaining a diploma. As documented in the past *Transition Reports,* rates of attendance by diploma holders at the residential universities have varied by less than five percentage points over the past four years.

Athabasca University differs from the Universities of Alberta, Calgary and Lethbridge in a variety of ways. For instance, Athabasca University has an open admissions policy which does not require high school prerequisites for admission to the University. This impacts the rate of attendance by students with and without a diploma. As in past years, only 45% of grade 12 students entering Athabasca University in the fall of 2000 held a diploma.[30] However, because students enrolled at Athabasca University constituted less than 2% of all attenders in the university sector, the lower rate of non-diploma attenders at that institution has little effect on the overall university sector average.

As can be seen in Table 9, of the 4,849 Alberta grade 12 students entering all public colleges in the fall of 2000, 79% had first obtained a diploma. There is a marked difference in the number of students with and without diplomas attending the two sub-sectors of public colleges. Over 87% of students attending the established public colleges held diplomas, while 31% of students who entered institutions that have become public colleges since 1997 held a diploma. As four of these institutions are former vocational colleges, students entering these colleges typically have enrolled in academic upgrading, skills training and pre-employment training. While this sub-sector accounted for only 6% of total post-secondary enrolment by grade 12 Alberta students in the fall of 2000, over 30% of all non-diploma holders attending post-secondary programs were registered at these five institutions.

Within the entire public college sector there was substantial variation in rates of attendance by diploma and non-diploma holders at the institutional level. For instance, in 2000, the lowest rate of non-diploma attenders among public colleges was to be found at Alberta College of Art & Design where only 5% of grade 12 students entered without first obtaining a high school diploma. The percentage of non-diploma attenders at Grande Prairie Regional College, Grant MacEwan College, Medicine Hat College, Mount Royal College and Red Deer College was also consistently below both sector and total averages, ranging from 9% to 12%. By way of contrast, at Fairview College, Keyano College and Olds College, between 23% and 33% of students did not have a diploma.

The same overall pattern of attendance is evident across the previous three years of data: Grande Prairie Regional College, Grant MacEwan College, Medicine Hat College, Mount Royal College and Red Deer College consistently had low rates of attendance by non-diploma holders while the percentage of non-diploma holders at Fairview College, Keyano College and Olds College was consistently above the sector average.

To a large extent this variation is due to the differing entrance requirements at each institution. Diploma and degree applicants at Alberta College of Art & Design, for example, must possess an Alberta High School Diploma, and the college offers only one preparatory and upgrading program. In contrast, Fairview College offers academic upgrading, high school completion and adult basic education – programs that would typically serve students without high school diplomas.

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[30] In 1997, 1998 and 2000 the percentage of diploma attenders at Athabasca University was under 50%. This rate is substantially lower than that of any of the other post-secondary institutions in the province with the exception of colleges that were formerly classified as vocational colleges.

Table 9
Grade 12 Students Attending Post-Secondary Institutions by Diploma Status and Post-Secondary Institution

Institution	% Attending With Diploma	% Attending Without Diploma
Universities		
Athabasca University	45.3	54.7
University of Alberta	91.5	8.5
University of Calgary	93.4	6.6
University of Lethbridge	96.2	3.8
Universities Total	**91.9**	**8.1**
Private University Colleges		
Augustana University College	92.0	8.0
Canadian University College	81.1	18.9
Concordia University College of Alberta	89.1	10.9
The King's University College	89.8	10.2
Private University Colleges	**89.6**	**10.4**
Public Colleges		
Alberta College of Art & Design	94.9	5.1
Fairview College	71.2	28.8
Grande Prairie Regional College	90.8	9.2
Grant MacEwan College	88.1	11.9
Keyano College	77.2	22.8
Lakeland College	83.2	16.8
Lethbridge Community College	82.9	17.1
Medicine Hat College	90.1	9.9
Mount Royal College	89.6	10.4
Olds College	67.1	32.9
Red Deer College	88.6	11.4
Sub-Total	***87.4***	***12.6***
Public Colleges Since 1997		
Alberta College-Edmonton	33.6	66.4
Bow Valley College	20.5	79.5
NorQuest College	34.6	65.4
Northern Lakes College	15.5	84.5
Portage College	48.2	51.8
Sub-Total Public Colleges Since 1997	***30.5***	***69.5***
Public Colleges Total	**78.5**	**21.5**
Private Colleges		
Nazarene University College	88.2	11.8
North American Baptist College	93.5	6.5
St. Mary's College	91.7	8.3
Private Colleges Total	**91.7**	**8.3**
Technical Institutes		
NAIT	86.7	13.3
SAIT	82.9	17.1
Technical Institutes Total	**85.1**	**14.9**
TOTAL	**85.6**	**14.4**

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5.3 Years to Earn High School Diploma

Table 10 presents the average number of years those students entering post-secondary institutions with an Alberta High School Diploma had taken to earn their diplomas. Few differences of note are apparent. The average number of years students took to graduate from high school ranged from 2.9 to 3.2 years at all institutions with the exception of those institutions that have only become public colleges since 1997. Even within this sub-sector, there was considerable variation: those students attending Alberta College-Edmonton with a diploma had taken, on average, only 3.5 years to obtain a high school diploma while the average for students attending Bow Valley College was 4.8 years. However, it must be noted that the numbers on which these averages are based are relatively small, as within this sub-sector attenders with diploma were in the minority.

5.4 Credits Awarded

Table 10 also presents data showing the average number of high school credits obtained by grade 12 diploma-holders attending post-secondary institutions. On average, students attending universities with a diploma had seven more credits (124) than did students attending established public colleges with a diploma (117). Diploma holders at Athabasca University had fewer credits (113) than did diploma holders at the other three universities. At the majority of public colleges established prior to 1997, the average number of credits earned by diploma holders was between 114 and 115 credits. However there were notable variations: diploma holders at the public college with the largest number of attenders - Grant MacEwan College - had earned 121 credits prior to entry, raising the average number of credits for the established public colleges sector to 117. By way of contrast, diploma holders at Fairview College had earned, on average, 111 credits.

The average number of credits attained by diploma holders enrolled at the private university colleges (119) is higher than that of students entering public colleges. At Concordia University College of Alberta diploma holders had obtained an average of 120 credits, while at The King's University College the average number of credits is 123. Diploma holders enrolled at the former vocational colleges had obtained, on average, 113 credits prior to entering post-secondary programs. There is substantial variation between institutions within this sub-sector: diploma holders entering Alberta College-Edmonton had obtained, on average, 116 credits while diploma holders entering NorQuest College and Northern Lakes College had obtained an average of 108 credits.

The average number of credits attained by diploma holders enrolled in private colleges (116) and technical institutes (115) are close to the sector average for public colleges (117). With the exception of institutions within the university sector and the private university colleges sector, this average is exceeded only by the average number of credits earned by diploma holders entering two individual institutions: Grant MacEwan College (121) and North American Baptist College (119).

Table 10
Mean Number of Years Taken to Earn Diploma and Mean Credits Earned of Grade 12 Diploma Holders Attending Post-Secondary Institutions, by Institution

Institution	% Attending With Diploma	Mean Years to Earn Diploma	Mean Credits Earned
Universities			
Athabasca University	45.3	3.2	113
University of Alberta	91.5	3.0	127
University of Calgary	93.4	3.0	122
University of Lethbridge	96.2	3.0	120
Universities Total	**91.9**	**3.0**	**124**
Private University Colleges			
Augustana University College	92.0	3.0	116
Canadian University College	81.1	3.0	118
Concordia University College of Alberta	89.1	3.1	120
The King's University College	89.8	3.0	123
Private University Colleges	**89.6**	**3.0**	**119**
Public Colleges			
Alberta College of Art & Design	94.9	3.2	115
Fairview College	71.2	3.1	111
Grande Prairie Regional College	90.8	3.0	114
Grant MacEwan College	88.1	3.1	121
Keyano College	77.2	3.1	114
Lakeland College	83.2	3.1	115
Lethbridge Community College	82.9	3.1	114
Medicine Hat College	90.1	3.0	115
Mount Royal College	89.6	3.1	115
Olds College	67.1	3.1	114
Red Deer College	88.6	3.1	117
Sub-Total	***87.4***	***3.1***	***117***
Public Colleges Since 1997			
Alberta College-Edmonton	33.6	3.5	116
Bow Valley College	20.5	4.8	114
NorQuest College	34.6	3.8	108
Northern Lakes College	15.5	4.0	108
Portage College	48.2	3.6	114
Sub-Total Public Colleges Since 1997	***30.5***	***3.8***	***113***
Public Colleges Total	**78.5**	**3.1**	**117**
Private Colleges			
Nazarene University College	88.2	2.9	116
North American Baptist College	93.5	3.0	119
St. Mary's College	91.7	3.2	114
Private Colleges Total	**91.7**	**3.1**	**116**
Technical Institutes			
NAIT	86.7	3.2	116
SAIT	82.9	3.2	114
Technical Institutes Total	**85.1**	**3.2**	**115**
TOTAL	**85.6**	**3.1**	**120**

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6. ACADEMIC CHARACTERISTICS OF NEW POST-SECONDARY STUDENTS: GRADE 12 COURSE AVERAGES BY INSTITUTION

6.1 Overview

This section continues the examination of the academic characteristics of students in the grade 12 cohort who moved into provincial post-secondary institutions in the fall of 2000. It first considers the overall grade 12 average of entrants and then studies their academic achievement in the core 30-level courses of Language Arts, Social Sciences and Mathematics. As was the case in the previous three sections, the data is analysed at the level of individual post-secondary institutions and reflects the wide range of post-secondary institutions in the province.

6.2 Overall Grade 12 Average

Given the diversity of Alberta's post-secondary institutions, it is not surprising to find differences in overall grade 12 averages among post-secondary sectors. As can be seen in Table 11, the higher grade 12 averages were found among students entering Alberta's three residential universities where averages ranged between 76% and 78%. The grade 12 average in all courses of students entering Athabasca University (70%) was notably lower than the average of students entering the other universities. However, because of the relatively small number of students in attendance at Athabasca University, the average for the university sector as a whole remained high (78%).

The grade 12 average among students attending the established public colleges (70%) was almost eight percentage points lower than the average of students attending the university sector. Student averages at these public colleges fluctuated by institution; they ranged from 67% at Keyano and Olds Colleges and 68% at Fairview College, to 72% at the Alberta College of Art & Design, Grant MacEwan College and Medicine Hat College. Students enrolled at institutions designated as public colleges only since 1997 had a substantially lower overall grade 12 average (65%) than students at the established colleges (70%). However, due to the small numbers in this sub-sector, the average for the entire public college sector was not affected.

There is a gap of more than six percentage points between the average for students in the university sector and the sector with the next highest average – the private college sector (71%). This is particularly noteworthy given how closely the remaining sectors are grouped. The averages for the entire public college sector (70%), the private university college sector (70%), the technical institutes sector (69%), and the private colleges sector (71%), are within less than three percentage points of each other.

With the exception of the private college sector whose numbers and constituent institutions have fluctuated considerably over the past four years, the above pattern and sector rankings have remained fairly consistent over the course of previous *Transition Reports*. Overall, there has been a slight but steady increase in the overall grade 12 average for each sector, as well as for the system total.[31]

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[31] Since the first Transitions Report in 1996/97 there has, on a yearly basis, been an increase of approximately half a percentage point in each sector as well as in the overall system total.

6.3 Performance in Language Arts 30

Table 11 also examines academic achievement in Language Arts 30, Social Studies 30, and Mathematics 30 – courses that are often specified as requirements for entry into post-secondary programs. The average mark in Language Arts 30 for all Alberta students entering post-secondary institutions in the fall of 2000 was 71%. However, there were distinct patterns of achievement by sector. To some extent, these patterns resemble those noted in the previous section describing overall grade 12 averages: students entering universities, particularly residential universities, had the highest averages in Language Arts 30. Averages ranged from 72% at the University of Lethbridge to 76% at the University of Alberta. As with other academic measures, the average mark in Language Arts 30 for students entering Athabasca University was 67% – substantially below the overall university sector average of 75%.

The average mark in Language Arts 30 of students entering the next largest sector, the public colleges sector, was 68%. Students attending Grande Prairie Regional College and Grant MacEwan College had the highest average grade in Language Arts 30 (69%) while students at Lethbridge Community College had the lowest average (64%). As was the case with overall grade 12 averages, the sector averages of students at private colleges (69%) and private university colleges (68%) were slightly higher than the average of students entering the established public colleges. Within the private university colleges a pattern begins to emerge: the average mark in Language Arts 30 of students entering Concordia University College was six points lower than the average mark of entrants to the three other post-secondary institutions within the sector.

While the averages of students entering post-secondary institutions in the private colleges sector, the private university colleges sector and the public colleges sector were clustered around 68%, the average for students entering technical institutes was four percentage points lower (64%). Finally, the sub-sector comprising the institutions established as public colleges only since 1997 had the lowest sector average in Language Arts 30 (61%).

6.4 Performance in Social Studies 30

Looking at Table 11, it can be seen that students entering the university sector once again had significantly higher averages in Social Studies 30 than students in any of the other sectors. The average for the university sector was 75%, while averages for three of the other sectors – private university colleges, public colleges and private colleges – were all 66%, placing them ten percentage points below that of students attending university. The average grade of students entering the two technical institutes was 64%, while the average for the sector comprising Alberta College-Edmonton and the former vocational colleges was substantially below that at 58%.

Once again patterns emerge among the institutions comprising certain sectors. In the university sector, the average grade of students entering Athabasca University (63%) was substantially lower than the average of students entering the residential universities. Within the private university colleges sector, averages ranged between 67% and 70% with the exception of students entering Concordia University College whose average (63%) was lower than the sector average of 66%. The average of students attending St Mary's College was somewhat lower than that of students attending the other private colleges.

The technical institutes sector demonstrated a high degree of consistency: average marks for students attending NAIT and SAIT were within two percentage points of each other in overall grade 12 average, Language Arts 30 and Social Studies 30.

6.5 Performance in Mathematics 30

A slightly different pattern emerges when looking at the academic achievement of students in Mathematics 30. The university sector average in Mathematics 30 was 76%. However there was greater variation among the institutions within the university sector than was the case with averages in Language Arts 30 and Social Studies 30. Students at the University of Alberta (78%) and the University of Calgary (76%) had the highest averages in Mathematics 30. The average for students at the University of Lethbridge (70%) was notably lower than the average of students entering the other residential universities. As with other measures of academic achievement, the average for Athabasca University students (64%) was considerably lower than the averages of students entering the residential universities.

The average for all students enrolled at established public colleges was 66% – a full ten percentage points lower than students in the university sector. The averages of students entering individual institutions within the public college sector ranged from 61% at Lethbridge Community College, to 68% at Medicine Hat Community College and 69% at Grant MacEwan College. In contrast to student averages in Language Arts 30 and Social Studies 30, students in the public college sector had higher grades in Mathematics 30 than students at private colleges (63%) and the private university colleges (64%). Students entering those institutions deemed public colleges only since 1997 had an average grade in Mathematics 30 of 58%.

It is interesting to note that, with the exception of the university sector, sector averages clustered in the mid to low 60's while the average in the university sector was more than ten percentage points higher at 76%.

6.6 Summary of Patterns of Academic Performance in 30-Level Courses

Students from the grade 12 cohort who attended post-secondary institutions within the university sector consistently had the highest averages in all of the 30-level courses. There was a significant gap of a minimum six percentage points between the averages of students in the university sector and the averages of students in any of the other sectors. Averages of students in non-university sectors were slightly lower in Social Studies 30 than in Language Arts 30. As a result, there was a minimum nine percentage points difference in average grade in Social Studies 30 between students who entered the university sector and those who entered post-secondary institutions within the other sectors.

Looking at Table 11, it can also be seen that averages in Mathematics 30 for students at the two largest residential universities were higher than averages in Language Arts 30 and Social Studies 30. Interestingly, the average grades in Mathematics 30 for students in all the other sectors were lower than the average grades in Language Arts 30 and Social Studies 30. As a result, the gap between the university sector average and the averages in the remaining sectors is larger in the case of Mathematics 30 than is the case with Language Arts 30 and Social Studies 30. There is a minimum of ten percentage points difference in average grade between students who entered the university sector and those who entered post-secondary institutions within the other sectors.

Table 11
Average in All Grade 12 Courses, Language Arts 30, Social Studies 30 and Mathematics 30 of Grade 12 Students Attending Post-Secondary Institutions, by Institution

Institution	All Grade 12 Courses	Language Arts 30 (N=12,134)	Social Studies 30 (N=10,695)	Mathematics 30 (N=10,347)
Universities				
Athabasca University	70	67	63	64
University of Alberta	78	76	76	78
University of Calgary	78	74	74	76
University of Lethbridge	76	72	71	70
Universities Total	**78**	**75**	**75**	**76**
Private University Colleges				
Augustana University College	72	71	70	66
Canadian University College	73	71	67	66
Concordia University College of Alberta	67	65	63	62
The King's University College	71	71	68	68
Private University Colleges	**70**	**68**	**66**	**64**
Public Colleges				
Alberta College of Art & Design	72	68	64	63
Fairview College	68	66	63	62
Grande Prairie Regional College	70	69	66	66
Grant MacEwan College	72	69	68	69
Keyano College	67	67	68	62
Lakeland College	70	67	62	64
Lethbridge Community College	70	64	63	61
Medicine Hat College	72	67	67	68
Mount Royal College	69	66	64	62
Olds College	67	67	62	64
Red Deer College	71	68	65	65
Sub-Total	***70***	***68***	***66***	***66***
Public Colleges Since 1997				
Alberta College-Edmonton	64	59	59	58
Bow Valley College	67	65	62	61
NorQuest College	65	62	57	61
Northern Lakes College	64	60	56	45
Portage College	66	58	61	58
Sub-Total Public Colleges Since 1997	***65***	***61***	***58***	***58***
Public Colleges Total	**70**	**67**	**66**	**65**
Private Colleges				
Nazarene University College	72	70	66	68
North American Baptist College	74	71	71	70
St. Mary's College	70	68	65	59
Private Colleges Total	**71**	**69**	**66**	**63**
Technical Institutes				
NAIT	69	65	64	65
SAIT	68	63	64	62
Technical Institutes Total	**69**	**64**	**64**	**64**
TOTAL	**73**	**71**	**70**	**71**

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7. ACADEMIC CHARACTERISTICS OF NEW POST-SECONDARY STUDENTS: PATTERNS OF CORE GRADE 12 COURSE COMPLETIONS BY POST-SECONDARY INSTITUTION

7.1 Overview

The previous section provided an overview of the average grades in core 30-level courses of students moving into post-secondary institutions. Discussion focused on the academic performance of students who had registered for courses in Language Arts 30, Social Studies 30 or Mathematics 30. This section offers a slightly different perspective on the academic characteristics of students attending post-secondary programs in the province by asking what *proportion* of students at each post-secondary institution had taken 33-level or 30-level courses in Language Arts, Social Studies or Mathematics. Such an approach allows for consideration of all students attending post-secondary programs for it takes into account both students who did choose to take a particular 30-level course as well as those who chose not to take that same course prior to entering the post-secondary system. Looking at the rates at which students successfully completed courses commonly required for post-secondary admission – such as Language Arts 30 or Mathematics 30 – or courses designated as necessary for obtaining a diploma – such as Language Arts 30 or 33 and Social Studies 30 or 33 – can offer us further insight into the transition process.

7.2 Patterns of Course Completions in Language Arts

Language Arts 30 is the most widely required course for admission into post-secondary programs. 12,134 students, or 83% of all students attending post-secondary institutions had registered in Language Arts 30 and 82% of the entire grade 12 cohort had succeeded in passing the course.

An interesting pattern emerges when comparing sector averages in Table 12. Over 95% of students in both the university and private colleges sectors had taken Language Arts 30 and over 95% in these sectors had passed Language Arts 30. The proportion of students within these two sectors who had taken the course was virtually identical to the proportion who had passed.

Table 12 also shows that at established public colleges, the rates of taking and passing Language Arts 30 was somewhat lower than at residential universities, private university colleges and private colleges. Overall, 82% of students at the established public colleges had taken Language Arts 30 and close to that same percentage (81%) had passed the course. However, once again the percentages varied substantially among institutions within this sector: 91% of students attending Grant MacEwan College had completed Language Arts 30 while only 56% of students at Lakeland College had done so. At Fairview College and Olds College, less than 50% of students had taken Language Arts 30.

At those institutions only recently deemed public colleges, less than half of all students (36%) had completed Language Arts 30 prior to entering the post-secondary sector. Although the proportion of students attending Alberta College-Edmonton and Portage College who took Language Arts 30 was higher than at the other three institutions, a significantly lower proportion of these students had received a passing grade. At Alberta College-Edmonton 41.8% had taken Language Arts 30 but only 37.5% had passed. The percentage of students who had received a passing grade at Portage College was slightly lower; 40% had taken Language Arts 30 but only

32.9% of all students had passed. This suggests that these students may have had aspirations to continue on to post-secondary programs that required Language Arts 30.

Did those institutions with lower percentages of students entering post-secondary programs with a passing grade in Language Arts 30 necessarily have higher percentages of students entering with a passing grade in Language Arts 33? Looking at sector level data, such a pattern does emerge: those institutions with lower percentages of students entering post-secondary programs with a passing grade in Language Arts 30 do have higher percentages of students entering with a passing grade in Language Arts 33. This would of course be the case were the students focused on completing a high school diploma: successful completion of either Language Arts 30 or Language Arts 33 is a prerequisite to obtaining a high school diploma. It is not surprising then to note that the exception to this rule occurred, for the most part, only at those institutions with higher rates of non-diploma attenders. Institutions with higher rates of non-diploma attenders, such as Athabasca University, Fairview College, Olds College, Alberta College-Edmonton, Bow Valley College, NorQuest College, Northern Lakes College and Portage College (see Table 9), generally had the highest rates of students attending without either Language Arts 30 or Language Arts 33 (see Table 12).

This pattern does vary somewhat by institution, particularly within the established public colleges sector. Keyano College, Lakeland College and Lethbridge Community College had rates of non-diploma attenders of over 15%. This did not result in a particularly high rate of students attending without either Language Arts 30 or 33. Only six to eight percent of attenders at these institutions had not taken Language Arts 30 or 33. This contrasts with the pattern at Fairview College and Olds College where there were moderately higher rates of non-diploma attenders accompanied by substantially higher rates of students attending without a 30- or 33-level course in Language Arts. At Fairview College only 37% of the grade 12 entrants had taken Language Arts 30 while over 46% had taken Language Arts 33. At Olds College 43% of entrants had taken Language Arts 30, while only 29% had taken Language Arts 33. Cumulatively then, Fairview College and Olds Colleges had the highest percentages of students entering programs without any 30- or 33- level course in Language Arts: at Fairview College 17% of students had not completed either Language Arts 30 or Language Arts 33 and at Olds College 28% of students not completed either one of these courses.

Table 12
Percent of Students Taking & Passing Language Arts 30, Percent Passing Language Arts 33, Percent without Language Arts 30 or 33, by Institution

Institution	Total Attending	% Taking LA 30	% Passing LA 30	% Passing LA 33	% Without LA 30 or 33
Universities					
Athabasca University	106	66.0	65.1	9.4	25.5
University of Alberta	3047	96.9	96.6	1.2	2.2
University of Calgary	2489	96.9	96.9	0.8	2.2
University of Lethbridge	578	97.4	97.2	1.2	1.6
Universities Total	**6220**	**96.4**	**96.2**	**1.2**	**2.6**
Private University Colleges					
Augustana University College	187	94.1	93.0	5.3	1.6
Canadian University College	37	--	--	--	--
Concordia University College of Alberta	229	93.9	93.4	3.9	2.6
The King's University College	59	91.5	91.5	0.0	8.5
Private University Colleges	**512**	**92.6**	**91.8**	**4.5**	**3.7**
Public Colleges					
Alberta College of Art & Design	79	82.3	79.7	17.7	2.5
Fairview College	52	36.5	36.5	46.2	17.3
Grande Prairie Regional College	368	86.1	85.6	10.6	3.8
Grant MacEwan College	1459	91.0	90.2	6.0	3.8
Keyano College	171	72.5	71.3	22.2	6.4
Lakeland College	137	56.2	55.5	38.0	6.6
Lethbridge Community College	474	62.0	59.7	31.9	8.4
Medicine Hat College	314	80.3	79.3	17.8	2.9
Mount Royal College	974	87.1	86.2	10.8	3.0
Olds College	76	43.4	43.4	28.9	27.6
Red Deer College	745	79.7	79.2	17.2	3.6
Sub-Total	***4849***	***81.5***	***80.6***	***14.8***	***4.7***
Public Colleges Since 1997					
Alberta College-Edmonton	280	41.8	37.5	21.4	41.1
Bow Valley College	185	28.1	27.6	33.0	39.5
NorQuest College	246	32.9	32.1	32.5	35.4
Northern Lakes College	103	35.9	34.0	39.8	26.2
Portage College	85	40.0	32.9	49.4	17.6
Sub-Total Public Colleges Since 1997	***899***	***35.7***	***33.1***	***31.6***	***35.3***
Public Colleges Total	**5748**	**74.3**	**73.1**	**17.4**	**9.5**
Private Colleges					
Nazarene University College	17	--	--	--	--
North American Baptist College	31	--	--	--	--
St. Mary's College	60	--	--	--	--
Private Colleges Total	**108**	**95.4**	**95.4**	**1.9**	**1.9**
Technical Institutes					
NAIT	1173	62.4	60.7	35.1	4.2
SAIT	856	64.8	63.0	32.0	5.0
Technical Institutes Total	**2029**	**63.4**	**61.7**	**33.8**	**4.5**
TOTAL	**14617**	**83.0**	**82.2**	**12.2**	**5.6**

-- Percentages based on numbers less than 6 have been suppressed to protect the privacy of individuals. Totals exclude suppressed values.

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7.3 Patterns of Course Completions in Social Studies

It is rare that Social Studies 30 is specifically required for admission to post-secondary institutions. If so, it is usually requested in conjunction with a particular program.[32]

Table 13 shows that 73% of all grade 12 students entering the post-secondary sector had taken Social Studies 30. This is 1,439 fewer students than had taken Language Arts 30.

Once again the highest percentage of students taking Social Studies 30 is to be found in the university sector: 90% of all entrants had completed Social Studies 30. Proportionally fewer students took Social Studies 30 in the private university colleges sector (86%) and private colleges sector (83%).

Seventy percent of students moving into the established public colleges had taken Social Studies 30. However there was considerable variation among the institutions pointing once again to the heterogeneity within this sector. At four of these colleges, the proportion of students who had taken Social Studies 30 was less than 50%. At Lakeland College and Lethbridge Community College approximately 48% of students had registered in Social Studies 30 prior to enrolment – a figure similar to the rates at the two technical institutes. The proportion of students who had taken Social 30 at Fairview College and Olds College was less than 40%. At those institutions deemed public colleges only since 1997, the percentage of students who had taken Social Studies 30 ranged from 9% at Bow Valley College to 28% at Alberta College-Edmonton.

As can be seen in Table 13, those institutions with lower percentages of students entering with successful completion of Social Studies 30 had generally higher percentages of students entering with successful completion of Social Studies 33. However at those institutions with larger proportions of non-diploma attenders, such as Fairview College and Olds College, lower percentages of Social Studies 30 completion was associated not only with higher completion rates in Social Studies 33 but also higher rates of students entering the institutions without any 30-level or a 33-level course in Social Studies whatsoever. Furthermore, the recently established public colleges sub-sector, which had the highest percentage of non-diploma attenders, also had the highest percentage of entrants who had neither a 30- nor a 33-level Social Studies course (57%). Overall, this contrasts with sector averages for all other sectors where the percentage of students moving into the post-secondary sector without a 30- level course in Social Studies was consistently below 11%.

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[32] For instance, Social Studies 30 is specified as an admission requirement to the Bachelor of Applied Child Studies, Bachelor of Applied Justice Studies and Bachelor of Applied Policy Studies at Mount Royal College.

Table 13
Percent of Students Taking & Passing Social Studies 30, Percent Passing Social Studies 33, Percent without Social Studies 30 or 33, by Institution

Institution	Total Attending	% Taking Social Studies 30	% Passing Social Studies 30	% Passing Social Studies 33	% Without Social Studies 30 OR 33
Universities					
Athabasca University	106	50.0	46.2	16.0	37.7
University of Alberta	3047	91.3	90.7	3.8	5.4
University of Calgary	2489	89.5	89.1	6.3	4.6
University of Lethbridge	578	92.6	92.2	5.4	2.4
Universities Total	**6220**	**90.0**	**89.5**	**5.2**	**5.4**
Private University Colleges					
Augustana University College	187	89.8	88.2	9.6	2.1
Canadian University College	37	--	--	--	--
Concordia University College of Alberta	229	86.9	84.3	9.6	6.1
The King's University College	59	81.4	81.4	11.9	6.8
Private University Colleges	**512**	**85.7**	**84.0**	**11.5**	**4.5**
Public Colleges					
Alberta College of Art & Design	79	74.7	73.4	24.1	2.5
Fairview College	52	40.4	38.5	40.4	21.2
Grande Prairie Regional College	368	75.5	75.0	20.4	4.6
Grant MacEwan College	1459	78.6	77.4	15.8	6.9
Keyano College	171	61.4	59.6	28.7	11.7
Lakeland College	137	48.9	46.0	40.9	13.1
Lethbridge Community College	474	47.9	45.8	42.0	12.2
Medicine Hat College	314	73.2	70.7	23.6	5.7
Mount Royal College	974	71.0	68.8	25.8	5.4
Olds College	76	34.2	31.6	38.2	30.3
Red Deer College	745	70.3	68.3	25.4	6.3
Sub-Total	***4849***	***69.6***	***67.8***	***24.6***	***7.6***
Public Colleges Since 1997					
Alberta College-Edmonton	280	27.9	23.2	27.5	49.3
Bow Valley College	185	9.2	8.1	19.5	72.4
NorQuest College	246	17.1	14.2	24.8	61.0
Northern Lakes College	103	13.6	11.7	28.2	60.2
Portage College	85	23.5	21.2	45.9	32.9
Sub-Total Public Colleges Since 1997	***899***	***19.0***	***16.1***	***26.9***	***57.0***
Public Colleges Total	**5748**	**61.7**	**59.8**	**24.9**	**15.3**
Private Colleges					
Nazarene University College	17	--	--	--	
North American Baptist College	31	67.7	67.7	32.3	0.0
St. Mary's College	60	90.0	90.0	10.0	0.0
Private Colleges Total	**108**	**83.3**	**83.3**	**15.7**	**0.9**
Technical Institutes					
NAIT	1173	51.5	49.3	40.7	10.1
SAIT	856	48.8	47.0	40.9	12.1
Technical Institutes Total	**2029**	**50.4**	**48.3**	**40.8**	**10.9**
TOTAL	**14617**	**73.2**	**71.8**	**18.2**	**10.0**

-- Percentages based on numbers less than 6 have been suppressed to protect the privacy of individuals and are excluded from totals.

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7.4 Patterns of Course Completions in Mathematics

Mathematics 30 is not a prerequisite for a high school diploma. Of the 14,617 grade 12 students who moved into post-secondary programs, only 71% (N=10,347) had taken Mathematics 30 prior to entering post-secondary institutions.

However Mathematics 30 is often required for admission to residential university programs. It is not surprising then that within the university sector more students had completed Mathematics 30 prior to entering post-secondary programs than Social Studies 30. As can be seen in Table 14, 92% of all attenders within the university sector had taken Mathematics 30 whereas 90% of students had taken Social Studies 30. One exception to this pattern is the proportions of students at the University of Lethbridge who had taken Mathematics 30. The percentage of students at the University of Lethbridge who had taken Language Arts 30 and Social Studies 30 courses was marginally higher than the percentage of students at the Universities of Alberta and Calgary. However the percentage of students at the University of Lethbridge who had taken Mathematics 30 was lower than the percentage of students at the Universities of Alberta and Calgary who had taken the same course. Only 84% of the grade 12 students entering the University of Lethbridge had taken Mathematics 30 – ten percentage points lower than at the University of Alberta (94%) and the University of Calgary (95%).

As with other academic characteristics, students at Athabasca University did not follow the pattern of students at the residential universities: 37% of students at Athabasca University had completed Mathematics 30. Not only was this lower than the percentages at the other universities, it was also lower, on average, than the percentages found at all other institutions with the exception of those institutions which have been established as public colleges only since 1997.

At all other institutions, a substantially smaller proportion of students had taken Mathematics 30 prior to entrance. In fact, the next highest sector averages were more than eighteen percentage points below the percentage in the university sector. At private colleges and private university colleges only 75% of students had taken Mathematics 30 prior to entry.

The average percentage of students in the public college sector taking Mathematics 30 (60%) was a further fifteen percentage points lower than that of students entering the private colleges and private university colleges. Once again this large sector demonstrated the greatest heterogeneity: less than 50% of students at Fairview College, Keyano College, Lakeland College, Lethbridge Community College and Olds College had registered in Mathematics 30, while 68% of students at Mount Royal College and 69% of students at Grant MacEwan College had done so.

The percentage of students who passed Mathematics 30 was lower than the percentage of students who passed either Language Arts 30 or Social Studies 30. While 71% of students entering post-secondary programs had taken Mathematics 30, 68% had received a passing grade. With the exception of students in the university and private university colleges sectors, at least 5% of students in all remaining sectors had taken Mathematics 30 but had not received a passing grade.

Table 14
Percent of Students Taking & Passing Mathematics 30, Percent Passing Mathematics 33, Percent without Mathematics 30 or 33, by Institution

Institution	Total Attending	% Taking Math 30	% Passing Math 30	% Passing Math 33	% Without Math 30 or Math 33
Universities					
Athabasca University	106	36.8	32.1	14.2	53.8
University of Alberta	3047	93.9	92.9	2.3	4.8
University of Calgary	2489	94.9	93.8	2.0	4.1
University of Lethbridge	578	84.3	81.8	11.1	7.1
Universities Total	**6220**	**92.4**	**91.2**	**3.2**	**5.6**
Private University Colleges					
Augustana University College	187	72.7	66.3	18.2	15.5
Canadian University College	37	59.5	59.5	13.5	27.0
Concordia University College of Alberta	229	78.2	72.5	14.0	13.5
The King's University College	59	78.0	78.0	10.2	11.9
Private University Colleges	**512**	**74.8**	**69.9**	**15.0**	**15.0**
Public Colleges					
Alberta College of Art & Design	79	51.9	48.1	29.1	22.8
Fairview College	52	28.8	21.2	25.0	53.8
Grande Prairie Regional College	368	60.6	55.4	26.6	17.9
Grant MacEwan College	1459	69.3	65.6	19.0	15.4
Keyano College	171	49.7	42.7	28.1	29.2
Lakeland College	137	40.1	36.5	38.7	24.8
Lethbridge Community College	474	37.6	33.3	40.7	25.9
Medicine Hat College	314	61.5	57.6	25.8	16.6
Mount Royal College	974	68.1	62.3	22.7	15.0
Olds College	76	30.3	28.9	28.9	42.1
Red Deer College	745	59.5	53.6	25.1	21.3
Sub-Total	***4849***	***60.4***	***55.7***	***25.1***	***19.2***
Public Colleges Since 1997					
Alberta College-Edmonton	280	33.2	26.8	21.1	52.1
Bow Valley College	185	17.3	14.6	16.8	68.6
NorQuest College	246	10.2	7.3	26.8	65.9
Northern Lakes College	103	8.7	3.9	14.6	81.6
Portage College	85	16.5	15.3	25.9	58.8
Sub-Total Public Colleges Since 1997	***899***	***19.2***	***15.2***	***21.5***	***63.3***
Public Colleges Total	**5748**	**54.0**	**49.4**	**24.5**	**26.1**
Private Colleges					
Nazarene University College	17	--	--	--	--
North American Baptist College	31	--	--	--	--
St. Mary's College	60	81.7	75.0	11.7	13.3
Private Colleges Total	**108**	**75.0**	**69.4**	**18.5**	**12.0**
Technical Institutes					
NAIT	1173	49.5	45.9	44.4	9.7
SAIT	856	52.8	47.3	35.5	17.2
Technical Institutes Total	**2029**	**50.9**	**46.5**	**40.7**	**12.9**
TOTAL	**14617**	**70.8**	**67.6**	**17.3**	**15.1**

-- Percentages based on numbers less than 6 have been suppressed to protect the privacy of individuals and are excluded from totals.

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7.5 Summary of Patterns of Course Completions

More students attending post-secondary programs in the province had taken Language Arts 30 prior to entering the post-secondary sector than had taken Social Studies 30 or Mathematics 30. Overall, 12,134 students, or 83% of all students attending post-secondary institutions had taken Language Arts 30. Of these 12,134 students, 99% had successfully completed the course. Of the 10,695 students who had taken Social Studies 30, (70% of the entire cohort), 98.2% had passed the course. 10,347 students (71% of the entire cohort) took Mathematics 30, however a significantly smaller proportion (95.5% of those taking the course or 68% of the entire cohort) had successfully completed the course.

In many ways, the pattern of completion and passing in Mathematics 30 is substantially different from completion patterns in Language Arts 30 and Social Studies 30. The percentages of students completing Language Arts 30 and Social Studies 30 in the private college and private university college sectors were actually within five to seven percentage points of those students completing the same courses in the university sector. By way of contrast, there was a gap of almost twenty percentage points between the proportion of students in the university sector successfully completing Mathematics 30 and the proportion of students in the private colleges and private university colleges sectors.

Comparing Tables 12, 13, and 14 also shows that the proportion of students without Mathematics 30 or 33 was substantially higher than the proportion without Language Arts 33 or Social Studies 33. This can be attributed to the fact that although Mathematics 30 is often a prerequisite to post-secondary admission, neither Mathematics 30 nor Mathematics 33 is a requirement for a high school diploma. Therefore there is greater incentive for completion of 30- or 33- level courses in Language Arts and Social Studies than there is for completion of Mathematics 30 or Mathematics 33.

8. JURISDICTIONAL AND GEOGRAPHICAL ORIGIN OF NEW POST-SECONDARY STUDENTS

8.1 Overview

One of the significant challenges faced by the post-secondary education system in Alberta revolves around making education accessible to students from all areas of the province. Currently, regions vary in the percentage of their students who enroll directly in the post-secondary learning system. While it is important to note that there are many reasons for these variations, and caution is to be exercised in drawing conclusions about jurisdictions having small populations, we can nevertheless note some general patterns that emerge from examining jurisdictional differences.

8.2 Post-Secondary Attendance by Jurisdiction

Table'15, as well as Figure 2 and Figure 3, present data on the jurisdictional origin of students who moved on to post-secondary programs in the province from public, separate and Francophone authorities. No data on private, federal, charter, or provincial authorities are included. In addition to information on overall rates of attendance, the data are partitioned to show the rates of attendance for both diploma-holders non-diploma holders

Overall, 28% of all students in these jurisdictions in the 1999/2000 grade 12 cohort attended post-secondary institutions in Alberta. While the north and central regions of the province sent approximately the same proportion of students to the post-secondary system, 25% and 26% respectively, the southern region sent a slightly higher proportion (29%). The proportion of students from the Calgary region attending post-secondary programs (29%) paralleled the proportion found in the southern regions. However the proportion of students from the Edmonton region who moved on into post-secondary institutions (31%) was not only higher than that of the Calgary region, it was also significantly higher than the proportion attending from the northern and central regions of the province.

The pattern of attendance for diploma-holders was similar to the pattern for the entire student cohort. However, as expected, in all regions the proportion of diploma-holders attending post-secondary institutions was significantly higher than the proportion of all students attending post-secondary.[33] Overall, 36% of diploma-holders moved into the post-secondary sector. In the north and central regions 34% and 33% of diploma holders, respectively, attended post-secondary programs. A slightly higher proportion (35%) attended in the southern region. Once again, Alberta's two largest urban regions had the highest proportion of diploma-holders attending: the Calgary public and separate jurisdictions together sent 39% of their diploma-holders on to post-secondary, slightly less than the Edmonton region jurisdictions (40%).

Overall, the rate of attendance among non-diploma holders was 10%. However the pattern of attendance by region varied from the pattern found among diploma holders. In the northern region of the province 11% of non-diploma-holders moved on to post-secondary studies while in the Edmonton region, 12% of non diploma-holders attended post-secondary institutions. The southern region, and the Calgary region had a lower percentage of non-diploma holders attending. The southern region sent 9% of non-diploma holders on to post-secondary programs

[33] In previous reports rates were reported for diploma-holders only.

in the province, the same proportion of diploma holders (9%) that was sent on from Calgary jurisdictions.

The last three rows of Table 15 also contain a comparison of the Francophone, Catholic, and non-Catholic jurisdictions. The data reveal that Catholic and Francophone school jurisdictions in Alberta sent a significantly larger proportion of their diploma-holders on to post-secondary studies than non-Catholic jurisdictions. However non-Catholic jurisdictions sent a slightly higher proportion of non-diploma holders on to the post-secondary sector. There are a myriad of reasons for this difference, and while this report does not speculate on these reasons,[34] the disparity is noteworthy.

Within each of the areas of the province, noteworthy differences emerge. In northern Alberta, the percent of all students enrolled in post-secondary ranged from 18% in the Pembina Hills Regional Division and 21% in the Fort Vermillion School Division to 50% in the East Central Francophone Education Region. Among central Alberta jurisdictions, the Buffalo Trail Regional Division (42%) sent the largest number of grade 12 students, proportionally, on to post-secondary, while Living Waters Catholic Regional Division (16%) sent the fewest. The range is greatest in the southern region of the province, ranging from 8% of grade 12 students in the Greater Southern Separate Catholic Francophone Educational Region to 40% of grade 12 students in the Prairie Rose Regional Division.

[34] One useful avenue worth exploring is to examine differences in mobility patterns of students in the public vs. the separate system, which except for the two jurisdictions in St. Albert, equate with the non-Catholic and Catholic jurisdictions, respectively. For the possible role played by school mobility in contributing to post-secondary attendance differences between jurisdiction types, please see, "Student mobility in Alberta," April, 2000, unpublished paper, Information Services, Alberta Learning.

Table 15
Grade 12 Students Attending Post-Secondary Institutions by Jurisdiction[35]

Jurisdiction	% All Grade 12 Students Attending	% Diploma Holders Attending	% Non-Diploma Holders Attending
Northern Alberta			
Aspen View Regional Division	36.0	45.6	8.5
East Central Francophone Education Region	50.0	54.5	0.0
Evergreen Catholic Separate Regional Division	29.1	32.4	5.0
Fort McMurray Roman Catholic Separate School District	30.7	35.1	17.4
Fort McMurray School District	34.4	41.3	18.4
Fort Vermillion School Division No. 2833	20.9	25.7	7.7
Grande Prairie Roman Catholic Separate School District	22.5	27.6	10.9
Grande Prairie School District	38.4	46.2	8.8
High Prairie School Division	22.7	29.2	6.3
Holy Family Catholic Regional Division	29.1	34.0	0.0
Lakeland Roman Catholic Separate School District	23.8	32.7	2.4
Northern Gateway Regional Division	23.4	29.3	4.7
Northern Lights School Division	23.5	31.2	2.4
Northland School Division	28.6	37.5	16.7
Northwest Francophone Education Region	52.6	50.0	100.0
Peace River School Division	34.0	41.0	9.9
Peace Wapiti Regional Division	33.2	41.3	6.3
Pembina Hills Regional Division	18.2	27.4	13.0
Northern Alberta Total	**25.2**	**33.6**	**11.1**
Central Alberta			
Battle River Regional Division	30.6	38.4	5.9
Black Gold Regional Division	22.7	27.0	5.8
Buffalo Trail Regional Division	41.9	48.6	9.4
Chinook's Edge School Division	20.7	27.3	6.6
Clearview School Division	22.2	28.3	6.9
East Central Alberta Catholic Separate Schools Region	29.3	44.0	8.0
Elk Island Catholic Separate Regional Division	34.4	38.8	7.8
Elk Island Public Schools Regional Division	27.9	34.9	5.8
Grande Yellowhead Regional Division	22.6	28.5	10.0
Living Waters Catholic Regional Division	16.4	25.0	0.0
Greater North Central Francophone Education Region	34.3	41.4	0.0
Parkland School Division	20.8	27.0	4.8
Red Deer Catholic Regional Division	33.6	40.7	9.5
Red Deer School District	26.2	34.1	10.3
St. Paul Education Regional Division	27.0	32.8	8.1
St. Thomas Aquinas Roman Catholic Separate Region	29.0	36.5	5.9
Sturgeon School Division	22.9	29.9	3.3
Wetaskiwin Regional Division	24.5	30.0	2.8
Wild Rose School Division	21.4	29.1	6.8
Wolf Creek School Division	22.9	27.7	10.4
Central Alberta Total	**25.7**	**32.5**	**7.0**

[35] These figures represent only students proceeding from grade 12 in 1999/2000 in Alberta's K-12 system to Alberta's post-secondary education system in September 2000. Jurisdictions include public, separate, and Francophone authorities only.

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Table 15 continued

Jurisdiction	% All Grade 12 Students Attending	% Diploma Holders Attending	% Non-Diploma Holders Attending
Edmonton Area			
Edmonton Catholic Regional Division	33.2	41.9	10.9
Edmonton School District	30.6	40.0	13.4
Greater St. Albert Catholic Regional Division	28.6	37.1	6.1
St. Albert Protestant Separate School District	28.1	33.9	10.8
Edmonton Area Total	**31.0**	**39.9**	**12.4**
Southern Alberta			
Canadian Rockies Regional Division	19.9	32.0	5.8
Christ the Redeemer Catholic Separate Regional	29.1	38.0	12.2
Foothills School Division	24.9	30.4	3.1
Golden Hills Regional Division	27.7	34.5	8.5
Grasslands Regional Division	29.8	36.8	5.7
Greater Southern Separate Catholic Francophone	8.3	14.3	0.0
Holy Spirit Roman Catholic Separate Regional Division	36.4	45.1	8.6
Horizon School Division	35.9	42.6	8.5
Lethbridge School District	28.6	36.0	12.8
Livingstone Range School Division	24.5	29.7	7.1
Medicine Hat Catholic Separate Regional Division	35.0	39.6	11.5
Medicine Hat School District	31.4	37.7	10.4
Palliser Regional Division	29.1	38.8	0.0
Prairie Land Regional Division	37.5	43.5	16.7
Prairie Rose Regional Division	40.1	46.8	4.9
Rocky View School Division	25.9	31.6	7.8
Westwind School Division	25.5	29.2	5.2
Southern Alberta Total	**28.8**	**35.4**	**8.2**
Calgary			
Calgary Roman Catholic Separate School District	34.3	41.0	7.8
Calgary School District	27.4	37.5	8.9
Calgary Total	**29.1**	**38.5**	**8.7**
TOTAL	**28.3**	**36.4**	**9.7**
Francophone Jurisdictions	**37.2**	**43.1**	**7.7**
Catholic Jurisdictions	**32.8**	**40.4**	**9.1**
Non-Catholic Jurisdictions	**27.2**	**35.3**	**9.8**

-- Percentages based on numbers less than 6 have been suppressed to protect the privacy of individuals. Totals exclude suppressed values.

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Figure 2
Percentage of Grade 12 Diploma Holders Attending Post-Secondary Institutions by Public School Jurisdiction

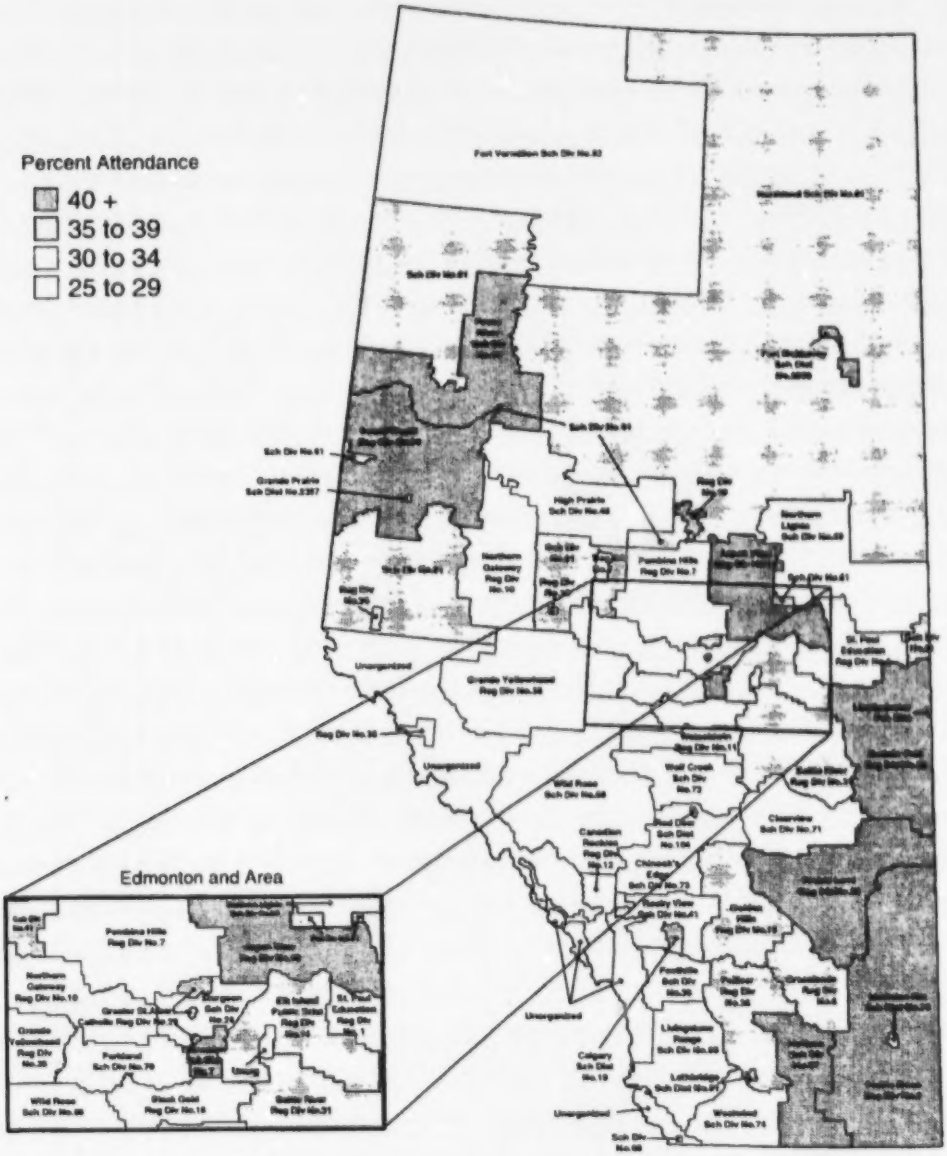

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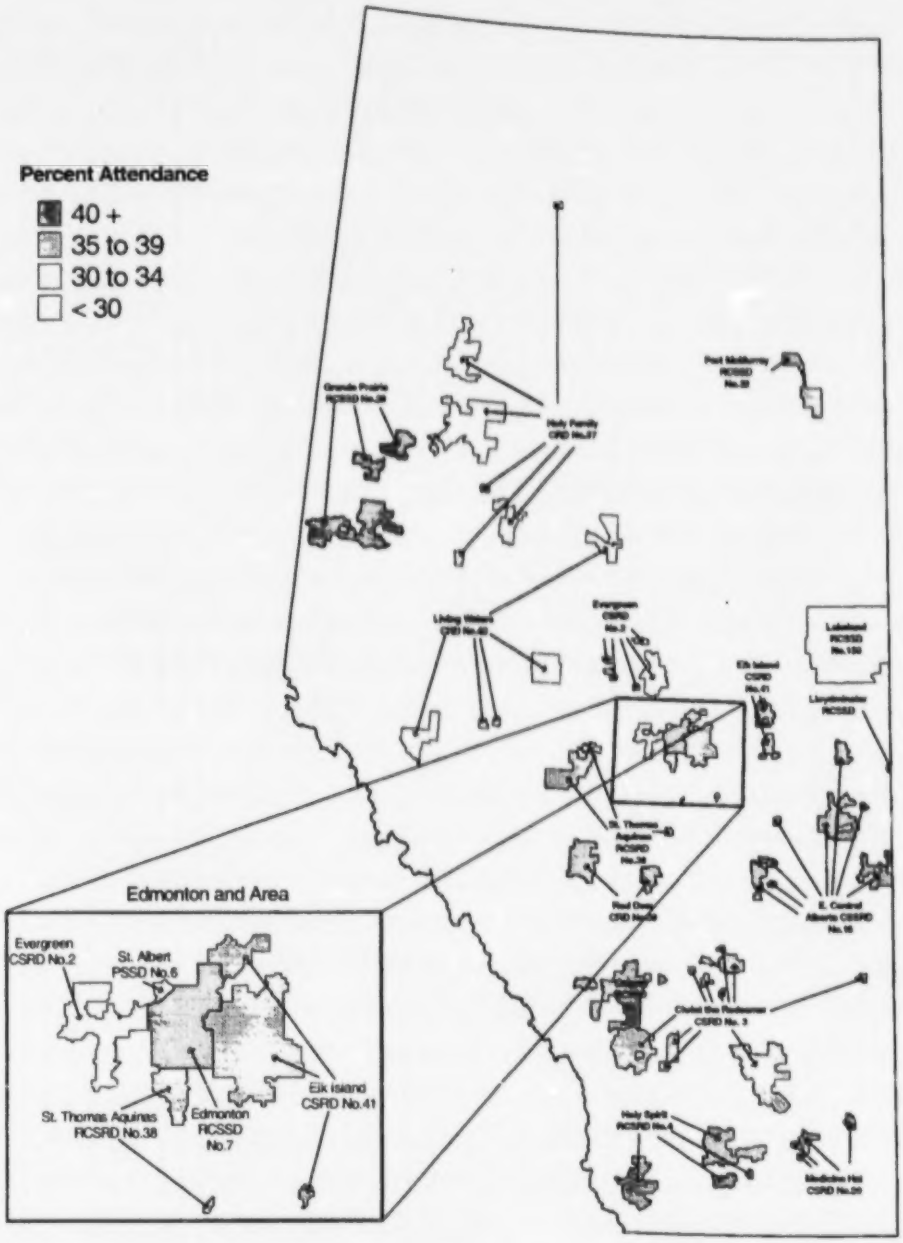
Figure 3
Percentage of Grade 12 Diploma Holders Attending Post-Secondary Institutions by Separate School Jurisdiction



8.3 Post-Secondary Attendance by Census Division

A different geographic picture of access to post-secondary institutions is provided by Table 16 which lists the percentage of grade 12 students attending post-secondary institutions, distributed, in the case of diploma holders, by sector as well as census division. School jurisdictional boundaries do not map directly to census divisions, since a jurisdiction can cross census division boundaries and vice versa. Thus, Table 16 is a useful addition to the data presented in Table 15. The divisions with the highest attendance on a per-capita grade 12 student cohort basis are CD No.1 (Medicine Hat – 34%) and CD NO.4 (Hanna – 41%). As evident from Figure 4, these census divisions adjoin in southeastern Alberta.

In the case of diploma holders, CD No. 1 (Medicine Hat), CD No. 4 (Hanna), CD No. 10 (Camrose) and CD No. 16 (Fort McMurray) have the largest proportion of students moving on – between 39% and 46%. Those census divisions with a residential university within their boundaries have significantly higher rates of diploma holders attending post-secondary institutions within the university sector alone – over 17% in all cases. If we examine diploma holders attending college and technical institutions, CD No. 1 (Medicine Hat), CD No. 19 (Grande Prairie) and CD No. 4 (Hanna) all had more than 30% of their diploma holders attending post-secondary in this sector. By contrast, CD No. 6 (Calgary) only had about 15% of its diploma holders attending the college/technical sector, while CD No. 15 (Banff) had about 14%.

The census division with the highest percentage of non-diploma students attending post-secondary institutions is Fort McMurray (17%). In Census Division No.1 (Medicine Hat), No. 3 (Pincher Creek), No.4 (Hanna), No.5 (Drumheller) and No.11 (Edmonton) over 10% of non-diploma holders attended post-secondary institutions. This contrasts with CD No. 18 (Grande Cache), CD No.13 (Whitecourt), CD No. 14 (Hinton) and CD No. 9 (Rocky Mountain House), where the proportion of non-diploma holders entering the post-secondary sector was less than 7%.

Table 16
Grade 12 Students[36] Attending Post-Secondary Institutions with and without Diploma, by Census Division

Census Division	% All Grade 12 Students Attending Post-Secondary	% Diploma Holders Attending All Post-Secondary	% Diploma Holders Attending Universities	% Diploma Holders Attending Colleges / Technical	% Non-Diploma Holders Attending All Post-Secondary
1 — Medicine Hat	33.7	39.8	6.7	33.1	10.1
2 — Lethbridge	30.2	37.6	19.0	18.6	9.7
3 — Pincher Creek	26.7	31.4	11.5	19.9	11.4
4 — Hanna	40.5	46.2	15.2	31.0	10.7
5 — Drumheller	30.8	38.9	14.2	24.7	11.0
6 — Calgary	28.2	37.1	22.0	15.1	8.6
7 — Stettler	31.6	38.6	10.1	28.5	8.4
8 — Red Deer	24.2	31.9	6.2	25.6	8.4
9 — Rocky Mountain House	24.2	33.5	13.2	20.3	6.3
10 — Camrose	32.0	40.3	12.3	27.9	8.5
11 — Edmonton	29.0	37.0	17.6	19.4	11.2
12 — St. Paul	24.6	32.3	10.1	22.2	7.6
13 — Whitecourt	26.2	32.9	9.6	23.3	6.2
14 — Hinton	21.0	28.5	6.4	22.1	6.5
15 — Banff	19.6	27.8	13.9	13.9	7.6
16 — Fort McMurray	32.1	39.0	10.9	28.1	17.2
17 — Slave Lake	24.3	31.1	6.2	24.9	7.8
18 — Grande Cache	21.1	29.5	2.9	26.6	5.4
19 — Grande Prairie	28.9	36.3	5.2	31.1	8.5
TOTAL	**28.4**	**36.5**	**16.6**	**19.9**	**9.7**

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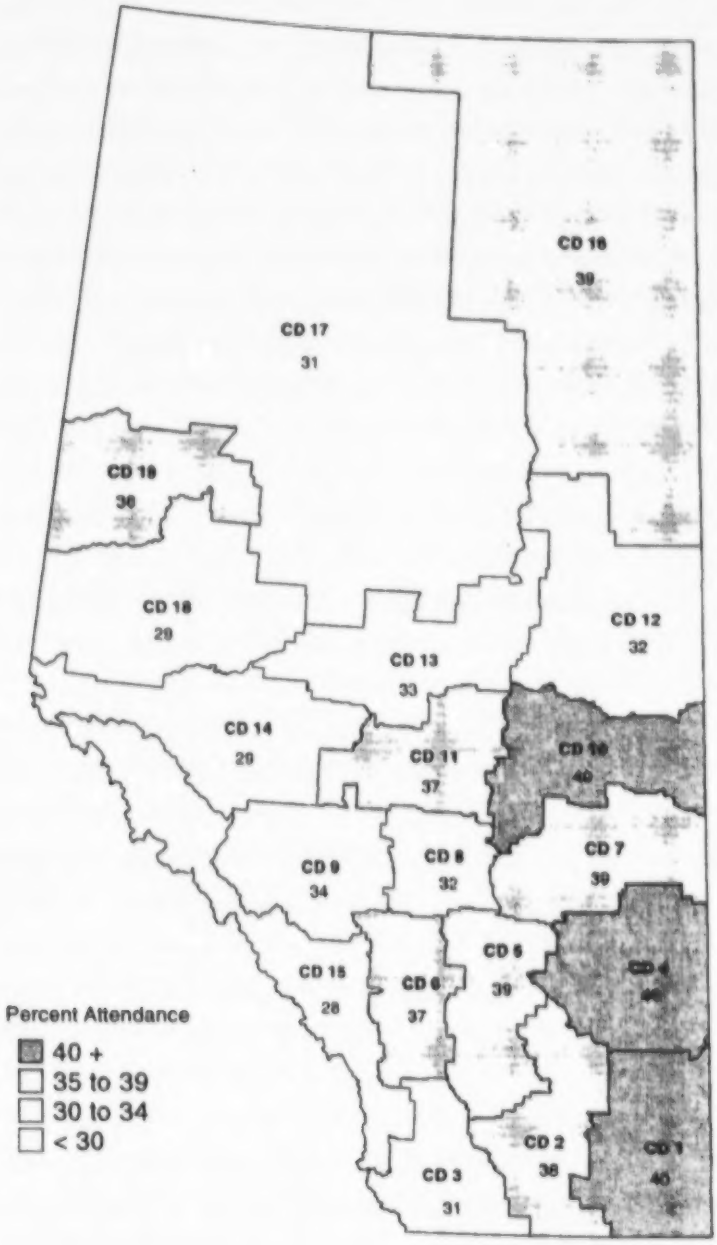
[36] Only students living in Alberta and who have reported a valid postal code are included. Approximately 0.6% of graduates reported an invalid postal code.

Figure 4
Percentage of Grade 12 Diploma Holders Attending Post-Secondary Institutions by Census Division



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9. DELAYED ENTRY STUDENTS FROM 1998/1999

9.1 Overview

While a significant majority of Alberta high school students do enter post-secondary institutions immediately after completing high school, a sizable minority delay entry into the post-secondary system for one or more years after leaving high school. This section focuses on 1998/1999 grade 12 students who entered the post-secondary system on a delayed basis in the fall of 2000. This is especially important since existing sources of administrative data are unable to partition specific student cohorts. It is not until the Alberta Student Number project is fully implemented that we will be able to accurately track student cohorts from individual years as they move from the secondary sector into post-secondary institutions in the province.

9.2 Defining Delayed Entry Students

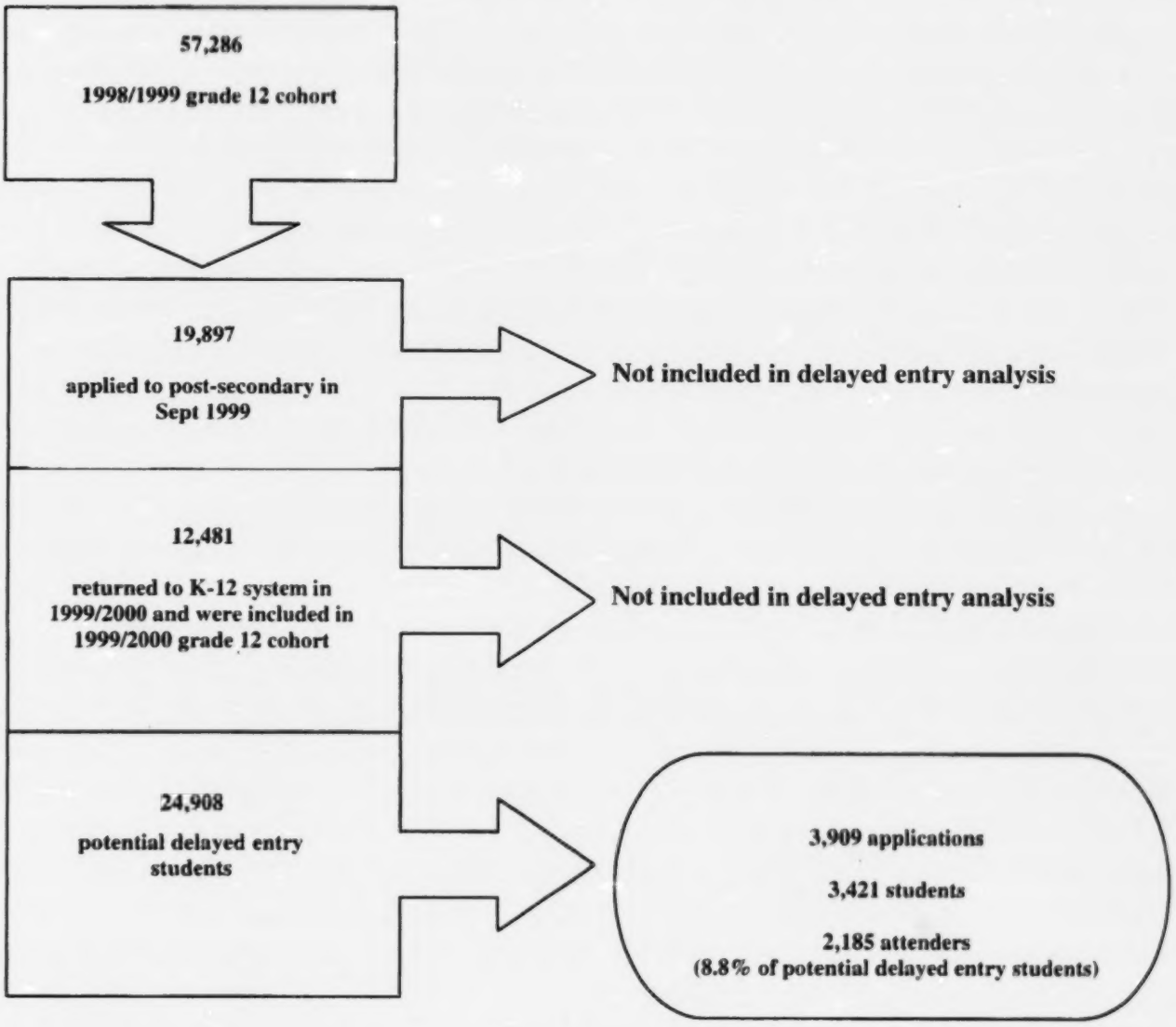
Analyzing delayed entry students is a more complicated process than analyzing students proceeding to post-secondary directly from high school. Figure 5 diagrams the cohort flow of the grade 12 student group, and the particular groups of students who were excluded from our analysis. The original 1998/1999 grade 12 cohort consisted of 57,286 students. Of these, 19,897 (35%) had applied to post-secondary in September 1999, leaving 37,389 students who had never attempted entry into post-secondary and could potentially enter post-secondary institution in September of 2000. Of these 37,389 students, 12,481 returned to the K-12 system in the 1999/2000 school year and therefore were part of the 1999 cohort sent to ACAT for matching. This student pool was removed from the 1998/1999 cohort leaving 24,908 potential delayed entry students in the 1998/1999 cohort.

The matching process revealed that of these 24,908 potential delayed entry students in the 1998/1999 cohort, 3,421 (14%) applied to post-secondary institutions for entry into programs beginning in September of 2000 more than one year after taking a grade 12 course. It is interesting to compare the application rate of the 1998/1999 delayed entry cohort with their direct entry counterparts. Of the 46,049 students in the 1998/1999 grade 12 cohort deemed potential direct entry students in the fall of 1999, 19,897 (43%) had applied to post-secondary institutions in the province for the fall 1999 session. From another perspective then, the rate of application among the grade 12 cohort of potential direct entry students (43%) was more than three times higher than the rate of application among potential delayed entry students one year later (14%).

While 3,421 students had applied to continue on to post-secondary education in the province on a one year delayed basis, 2,185 out of the 24,908 potential delayed entry students (8.8%) actually went on to attend provincial post-secondary institutions in the fall of 2000.

If these 2,185 students are compared against the original 1998/1999 grade 12 cohort of 46,049 students (after exclusions), then 4.7% of 1998/1999 Alberta grade 12 students entered post-secondary institutions after leaving the Alberta secondary system for one year. This is very similar to the previous year's rate: 4.4% of 1997/1998 Alberta grade 12 students had entered post-secondary institutions in the fall of 1999 after leaving the Alberta secondary system for one year.

Figure 5
Flow of 1999/2000 Alberta Learning Grade 12 Cohort, Delayed Entry


57,286
1998/1999 grade 12 cohort
19,897
applied to post-secondary in Sept 1999
Not included in delayed entry analysis
12,481
returned to K-12 system in 1999/2000 and were included in 1999/2000 grade 12 cohort
Not included in delayed entry analysis
24,908
potential delayed entry students
3,909 applications
3,421 students
2,185 attenders
(8.8% of potential delayed entry students)

9.3 Comparison of Delayed and Direct Entry Cohorts: Diploma Status and Attendance

Grade 12 students who delayed their entry into the post-secondary system by one year demonstrated distinctive characteristics in regards to diploma status, number of credits earned and academic performance.

Looking at patterns of diploma status among the individual students, Figure 6 shows that less than half of potential delayed entrants (49.3%) had obtained a diploma. Of these, 13.4% entered post-secondary programs in the fall of 2000. The proportion of diploma holders among the direct entry cohort was substantially higher. Among direct entry students, 66.6% had received a diploma and 38.1% of these students had entered post-secondary programs directly in the fall of 1999.[37]

Slightly more than half of the delayed entrant cohort had not received a diploma (50.7%), but only 4.3% of these non-diploma holders went on to participate in the post-secondary sector in the fall of 2000. By contrast, a much smaller proportion of the direct entry cohort (29.8%) had not obtained a diploma. However, proportionally more of these students (13.3%) had attended a post-secondary institution in the fall of 1999.

Of those students who had participated in grade 12 courses in the 1998/1999 school year but attended a post-secondary program on a delayed basis in the fall of 2000, one in four (24.9%) had not obtained a diploma. This contrasts with students who had proceeded directly to the post-secondary sector in the fall of 1999: only 14.8% of these students had not obtained a diploma.

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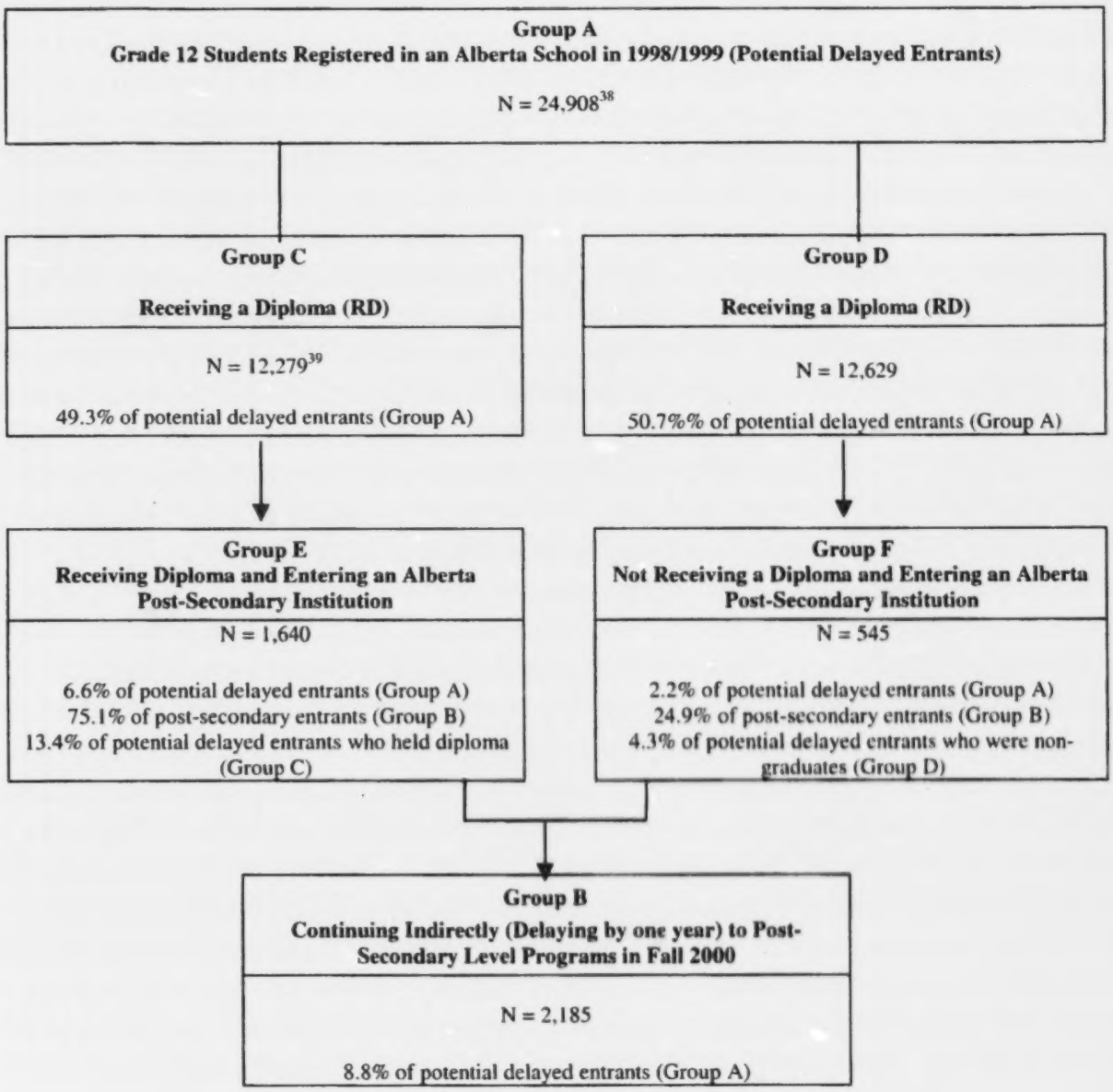
[37] For a more detailed description of diploma status and attendance among direct entry students in the 1998/1999 cohort, see Figure 2 in the 1998/1999 *Transitions Report* from which these data are drawn.

Figure 6
Diploma Status and Post-Secondary Attendance of 1998/1999 Grade 12 Students, Delayed Entry


Group A
Grade 12 Students Registered in an Alberta School in 1998/1999 (Potential Delayed Entrants)
N = 24,908[38]
Group C
Receiving a Diploma (RD)
N = 12,279[39]
49.3% of potential delayed entrants (Group A)
Group D
Receiving a Diploma (RD)
N = 12,629
50.7%% of potential delayed entrants (Group A)
Group E
Receiving Diploma and Entering an Alberta Post-Secondary Institution
N = 1,640
6.6% of potential delayed entrants (Group A)
75.1% of post-secondary entrants (Group B)
13.4% of potential delayed entrants who held diploma (Group C)
Group F
Not Receiving a Diploma and Entering an Alberta Post-Secondary Institution
N = 545
2.2% of potential delayed entrants (Group A)
24.9% of post-secondary entrants (Group B)
4.3% of potential delayed entrants who were non-graduates (Group D)
Group B
Continuing Indirectly (Delaying by one year) to Post-Secondary Level Programs in Fall 2000
N = 2,185
8.8% of potential delayed entrants (Group A)

[38] Includes all students registered in grade 12 in an Alberta school in the 1998/1999 school year (57,286), minus those who applied directly to post-secondary programs for the fall of 1999 (19,897), minus all students who registered in the K-12 system again in the 1999/2000 school year and who were included in the 2000 cohort sent to ACAT (12,481).

[39] Does not include students receiving a Certificate of Achievement.

9.4 Academic Characteristics of Delayed Entry Students by Sector and Institution

The following summarizes data based on the number of students attending individual post-secondary institutions on a delayed basis.

Table 17 makes it apparent that, when comparing attendance patterns among direct entry students and delayed entry students by post-secondary institution, the same patterns emerge as for the overall cohort. While 15% of direct entry students attending post-secondary programs in the fall of 1999 had not obtained a diploma prior to entry, a significantly higher percentage (25%) of the delayed entry attenders at post-secondary institutions in the province in the fall of 2000 did not hold a diploma. This difference is particularly pronounced among university entrants: only 7% of students proceeding directly from grade 12 into the university sector in 1999 were without a diploma, compared to 24% of those who delayed entry until 2000. In the established public colleges sector there was a significantly smaller difference in the percentage of non-diploma holders attending in the fall of 1999 (direct entry) and the fall of 2000 (delayed entry): 14% of the direct entry cohort did not hold a diploma, while 17% of the delayed entry cohort had not obtained a diploma. Within the recently established public colleges sub-sector as well as the technical institutes there was no difference in the rates of non-diploma holders between the direct entry and delayed entry attenders.

Given the lower proportion of diploma holders among the delayed entry pool, it is not surprising to find that these students also had fewer credits, on average, than their counterparts proceeding directly from high school. Table 18 indicates that delayed entry students had slightly fewer credits than students proceeding directly to post-secondary. Once again, the largest difference is to be found among university entrants – students proceeding directly into post-secondary programs had an average of 120 credits compared with 107 credits for delayed entry students. At the established public colleges, students proceeding directly into post-secondary programs had an average of 111 credits compared with 106 credits for students entering on a delayed basis. At technical institutions, there was virtually no difference in the average number of credits obtained by direct as opposed to delayed entry students. The exception to this overall pattern is to be found in the recently established public colleges sub-sector – those institutions which have become public colleges only since 1997. Within this sub-sector delayed entry students had *more* credits, on average, than those who had proceeded directly into the post-secondary system.

Table 19 presents comparative averages for direct and delayed entry students. In general, students who delayed entry until 2000 had lower averages than students who had proceeded directly into the post-secondary system in 1999. Students who had entered post-secondary programs directly in 1999 had a grade 12 average of 72.5% compared with an overall grade 12 average of 68.5% for those who entered on a delayed basis in the fall of 2000. Once again the difference is most pronounced in the university sector: the overall average of direct entry students was 77.3% compared to 72.7% for students who delayed entrance until the fall of 2000. However, the difference in overall grade 12 average between direct and delayed entry students was less pronounced (less than two percentage points) in the public college sector and virtually non-existent in the remaining sectors.

A similar pattern holds for Language Arts 30. The overall grade 12 average in Language Arts 30 for direct entry attenders is higher than the overall average in Language Arts 30 for delayed entry students. This occurs consistently in the university sector and the public colleges sector.

However at the recently established public colleges and the technical institutions there is virtually no difference in average between direct and delayed entry attenders.

The largest difference in average between direct and delayed entry attenders occurs when comparing the two groups' average in Mathematics 30. The average mark for direct entry students in Mathematics 30 was 72.4% compared to 66% for delayed entry students. Once again this was most pronounced among students in the university sector: the average in Mathematics 30 of direct entry attenders was 77% compared with 72% for delayed entry attenders. This difference holds throughout all sectors with the exception of the private colleges sector where the average for direct entry attenders was 66% compared to the average of 68% for delayed entry attenders. It should be noted, however, that the number of delayed entry attenders in this sector is small and results should be interpreted with caution. Within the remaining sectors the average for direct entry attenders is consistently higher than the average for delayed entry attenders. At the technical institutes there is a difference of three percentage points between direct and delayed entry attenders and at the recently established public colleges direct entry students had averages almost ten percentage points higher than their delayed entry counterparts. Given that there was no difference in these two sectors between direct and delayed entrants in both their overall grade 12 average and their average in Language Arts 30, the higher average of direct entry attenders compared to delayed entry attenders in Mathematics 30 is all the more noteworthy.

Table 17
Percent Without Diplomas of 1998/1999 and 1999/2000 Grade 12 Students Attending Post-Secondary Institutions, by Entry Status[40]

Institution	% Without Diplomas		
	1998/1999 Direct Entry in 1999[41]	1998/1999 Delayed Entry in 2000	1999/2000 Direct Entry in 2000[42]
Universities			
Athabasca University	31	41	55
University of Alberta	8	28	9
University of Calgary	4	20	7
University of Lethbridge	4	15	4
Universities Total	**7**	**24**	**8**
Private University Colleges			
Augustana University College	6	--	8
Canadian University College	18	--	19
Concordia University College of Alberta	16	--	11
The King's University College	15	--	10
Private University Colleges Total	**12**	**--**	**10**
Public Colleges			
Alberta College of Art & Design	6	--	--
Fairview College	37	--	29
Grande Prairie Regional College	15	25	9
Grant MacEwan College	15	19	12
Keyano College	21	--	23
Lakeland College	30	55	17
Lethbridge Community College	14	23	17
Medicine Hat College	13	12	10
Mount Royal College	13	14	10
Olds College	23	17	33
Red Deer College	8	14	11
Total	***14***	***17***	***13***
Public Colleges since 1997			
Alberta College-Edmonton	72	61	66
Bow Valley College	70	70	80
NorQuest College	67	73	65
Northern Lakes College	81	82	85
Portage College	66	72	52
Public Colleges since 1997 Total	***70***	***70***	***70***
Public Colleges Total	**24**	***28***	**22**
Private Colleges			
Nazarene University College	--	--	--
North American Baptist College	--	--	--
St. Mary's College	--	--	--
Private Colleges Total	**--**	**--**	**--**

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40 Includes students coded as attending more than one institution.

41 Because of changes in the composition of the sectors, percentages in this column differ slightly from those reported in Table 9 of 1998/1999 *Transitions Report*.

42 Percentages in this column are from Table 9 of the current report.

Table 17 Continued

Technical Institutes			
NAIT	13	15	13
SAIT	18	17	17
Technical Institutes Total	**16**	**16**	**15**
TOTAL	**15**	**25**	**14**

-- Percentages based on numbers less than 6 have been suppressed to protect the privacy of individuals. Totals exclude suppressed values.

Table 18
Average Number of High School Credits of 1998/1999 and 1999/2000 Grade 12 Students Attending Post-Secondary Institutions, by Entry Status

Institution	Average Number of Credits		
	1998/1999 Direct Entry in 1999[43]	1998/1999 Delayed Entry in 2000	1999/2000 Direct Entry in 2000[44]
Universities			
Athabasca University	108	92	83
University of Alberta	121	107	122
University of Calgary	120	109	119
University of Lethbridge	118	110	118
Universities Average	**120**	**107**	**120**
Private University Colleges			
Augustana University College	114	115	115
Canadian University College	116	110	113
Concordia University College of Alberta	114	105	114
The King's University College	113	104	120.
Private University Colleges Average	**114**	**109**	**115**
Public Colleges			
Alberta College of Art & Design	114	106	114
Fairview College	96	95	96
Grande Prairie Regional College	108	101	108
Grant MacEwan College	112	110	112
Keyano College	109	93	109
Lakeland College	108	99	108
Lethbridge Community College	110	100	110
Medicine Hat College	109	106	109
Mount Royal College	111	107	111
Olds College	106	106	106
Red Deer College	115	107	115
Average	***111***	***106***	***111***
Public Colleges since 1997			
Alberta College-Edmonton	77	91	86
Bow Valley College	77	72	66
NorQuest College	74	73	73
Northern Lakes College	68	68	67
Portage College	80	69	91
Public Colleges since 1997 Average	***75***	***77***	***77***
Public Colleges	**105**	**100**	**106**
Private Colleges			
Nazarene University College	121	120	115
North American Baptist College	117	95	118
St. Mary's College	118	101	113
Private Colleges Average	**118**	**104**	**115**

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[43] Because of changes in the composition of the sectors, these numbers may differ slightly from those reported in Table 10 of 1998/1999 *Transitions Report*.

[44] Percentages in this column are from Table 10 of the current report.

Table 18 continued

Technical Institutes			
NAIT	111	111	111
SAIT	107	106	107
Technical Institutes Average	**109**	**108**	**109**
AVERAGE	**112**	**104**	**113**

-- Number of credits based on numbers less than 6 have been suppressed to protect the privacy of individuals. Totals exclude suppressed values.

Table 19
Average in All Grade 12 Courses, Language Arts 30 and Mathematics 30 of 1998/1999 Grade 12 Students Attending Post-Secondary Institutions, by Entry Status

Institution	All Courses		Language Arts 30		Mathematics 30	
	Direct Entry in 1999[45]	Delayed Entry in 2000	Direct Entry in 1999	Delayed Entry in 2000	Direct Entry in 1999	Delayed Entry in 2000
Universities						
Athabasca University	67.7	66.5	65.7	66	65.6	57
University of Alberta	77.3	72.6	74.9	72	77.5	73
University of Calgary	77.9	74.0	74.0	73	77.9	73
University of Lethbridge	75.6	73.0	72.3	71	71.7	72
Universities Average	**77.3**	**72.7**	**74.2**	**72**	**77.1**	**72**
Private University Colleges						
Augustana University College	71.8	69.9	70.4	66	66.8	60
Canadian University College	74.4	70.0	69.6	67	71.7	64
Concordia University College	66.2	68.7	64.7	67	63.3	67
The King's Univ Col	69.7	72.6	69.1	74	66.9	70
Private University Colleges Total	**69.3**	**70.0**	**67.7**	**68**	**65.7**	**64**
Public Colleges						
Alberta College of Art & Design	71.6	69.4	69.0	65	61.2	57
Fairview College	66.7	66.7	66.0	60	56.2	59
Grande Prairie Regional College	69.9	66.4	67.9	62	67.2	61
Grant MacEwan College	70.3	68.7	68.4	67	68.9	65
Keyano College	68.9	63.5	68.0	61	65.0	56
Lakeland College	68.4	65.5	66.9	61	64.2	65
Lethbridge Community College	69.2	67.0	64.0	62	64.5	56
Medicine Hat College	70.7	69.4	67.7	66	67.8	66
Mount Royal College	68.6	68.2	65.5	63	64.6	62
Olds College	68.5	68.3	63.9	65	62.9	61
Red Deer College	70.7	67.9	67.9	64	67.8	64
Average	***69.8***	***68.0***	***67.2***	***65***	***66.8***	***64***
Public Colleges since 1997						
Alberta College-Edmonton	62.0	62.8	60.6	63	63.9	50
Bow Valley College	65.5	62.8	62.1	61	60.9	41
Norquest College	65.0	61.9	59.8	60	63.0	62
North Lakes College	63.8	61.9	61.6	61	59.6	62
Portage College	63.5	61.2	60.6	56	54.0	53
Public Colleges since1997	***63.8***	***62.2***	***60.8***	***61***	***62.4***	***53***
Public Colleges Total	**69.7**	**67.0**	**66.7**	**64**	**66.6**	**63**
Private Colleges						
Nazarene University College	73.9	76.2	78.2	76	69.4	77
North American Baptist College	73.9	71.8	72.9	66	69.3	61
St. Mary's College	69.0	70.1	65.7	65	62.4	65
Private Colleges Total	**71.4**	**72.4**	**69.8**	**68**	**66.0**	**68**

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[45] Percentages in the "Direct Entry in 1999" columns are from Table 12 of the 1998/1999 Transitions report. Because of changes in the composition of the sectors, these percentages may differ slightly from those reported.

Table 19 Continued

Technical Institutes						
NAIT	68.5	67.1	65.5	64	66.0	62
SAIT	67.3	66.9	62.2	63	64.1	62
Technical Institutes Average	**67.9**	**67.0**	**63.9**	**64**	**65.1**	**62**
AVERAGE	**72.5**	**68.5**	**70.3**	**66**	**72.4**	**66**
-- Percentages based on numbers less than 6 have been suppressed to protect the privacy of individuals. Totals exclude suppressed values.						

10. METHODOLOGICAL NOTES

10.1 Background

To investigate students' secondary to post-secondary transitions, Alberta Learning and the Alberta Council on Admissions and Transfer (ACAT) initiated a data-sharing project in which secondary level student data is linked to post-secondary level student data. In February 1992, ACAT initiated the Duplicate Application Detection (DAD) Project in conjunction with 26 post-secondary institutions. The project has enabled the ACAT Office to compare selected elements of new student application files from pairs of institutions to determine the extent of duplicate applications between institutions. The DAD project resulted in the development of a database containing application data for individuals applying to Alberta's public post-secondary institutions for September admission. A collaboration between ACAT and Alberta Learning to pilot an exploratory project using the DAD database to generate information on post-secondary application activity of high school students began in 1995. This report is modeled substantially after last year's report titled *Post-Secondary Transitions in Alberta: Educational Outcomes of 1998/1999 Grade 12 Students.*

10.2 The Data Exchange

Alberta's publicly funded post-secondary institutions, as well as three private institutions, participated in the Duplicate Application Detection (DAD) project for 1999/2000.[46] The basis of the data exchange process is the DAD record identifier, a 12 character identification number derived from the eight digits of the student's birth date and the first four characters of the surname in the sequence 'YYYYMMDDSURN.' It was known from the beginning that the DAD record identifier would be a *non-unique* identifier.[47] In particular, it does not capture unrelated individuals with the same birth date and similar surnames (e.g., Pierre Michaud and Jennifer Michaels, both having the same birth date), or multiple births such as twins or triplets. In the current project, Alberta Learning was able to generate non-duplicate DAD record identifiers for over 95 percent of cases. To maximize data integrity, only unique records were provided to ACAT for record matching.

As well as the DAD record identifier, Alberta Learning included the following fields in the file sent to ACAT:

- school code;
- postal code;
- school year (2000 for all records, representing the 1999/2000 school year); and
- diploma status as of Dec 31,2000.

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[46] The participating institutions included 29 institutions: all of Alberta's universities (4); public colleges (15); private university colleges (4); and technical institutes (2). In addition, four private colleges, including Alberta College, Nazarene University College, North American Baptist College, and St. Mary's College, participated.

[47] Perhaps the best statement describing how the DAD identifier should be viewed is by Andrew Barnard (p. 1), in a pioneering evaluation study of the DAD database: "...the use of a student identifier..., though not guaranteed to be unique to each applicant, offers a high enough probability of uniqueness to enable statistical measures of applicant behaviours *as though we were tracking individuals*" (emphasis in original). [Andrew A. Barnard. 1995. *A description and analysis of the Duplicate Application Detection (DAD) database for the years 1992, 1993 and 1994.* Edmonton: ACAT/Andrew Barnard Consulting].

For all DAD record identifiers for which ACAT was able to obtain a unique match (20,562 DAD record identifiers, representing 26,075 applications), it sent Alberta Learning the following information: [48]

- postal code;
- post-secondary institution applied to;
- indicator as to whether the applicant was deemed qualified for the program (universities only);
- indicator as to whether the applicant was offered admission to the program; and
- indicator as to whether the applicant was attending the institution.

10.3 Evaluating the Data

A process of data exchange of this nature is subject to compromises of data quality. First, given the choice of using DAD record identifiers, there is no sure way to ascertain whether any "match" between Alberta Learning and ACAT refers to the same person. For example, if the DAD identifier of 19780726MICH generated from AL data for Pierre Michaud is found in ACAT's database, it is not clear whether this ID refers to this individual or some other (perhaps Jennifer Michaels, also born on July 26, 1978).

However, for a subset of the data, we used other departmental data containing both the student's first name and last name as well as birth date, and found that very few (less than 1%) of our matches for this subset of data were "bad" matches. These bad matches represented students with the same birth dates but different surnames, even though they shared the first four letters of the surname.

In past years, data validity checks have estimated that over 95% of the distinct DAD record identifiers in our files were valid matches. There is no reason to expect this year's data to be any different. In preparing its file for this study, Alberta Learning eliminates records which generates duplicate DAD identifiers, therefore slightly underestimating the pool of potential applicants. On the other hand, there is always the possibility that some students who do not in fact go on to post-secondary programs will be matched to DAD record identifiers generated by other students, mainly applicants from out of province, resulting in a slight overestimation of matches. In short, until widespread use of the Alberta Student Number allows us to track students directly from the K-12 system into the post-secondary sector, the current matching process offers a consistently valid means of studying transitions to post-secondary education within the province.

While the ACAT data set used in this report is comprehensive, there are some omissions that need to be mentioned. Together, these omissions suggest that the post-secondary participation rates should be viewed as conservative estimates.

First, although the data set of grade 12 students is based on the entire population the post-secondary application, offers and admission rates exclude apprenticeship programs.[49] Second, the database excludes grade 12 students who have gone on to attend a post-secondary institution

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[48] It is important to remember that in this report, the unit of analysis is the *application*, and not the *student*. One student (represented by one DAD record identifier) may apply to more than one post-secondary institution, which will generate multiple applications. Multiple applications by the same student is an issue that complicates the admission process and potentially affects our understanding of access at Alberta's post-secondary institutions.

[49] Private vocational schools have also been omitted from the data set, which falls in line with traditional definitions of 'post-secondary' students.

outside of Alberta. Third, the population of grade 12 students was constructed on the basis of registration in at least one grade 12 course and includes both high school diploma holders and non-diploma holders (excluding non-diploma holders who registered in the K-12 system again in the 2000/2001 school year). Including non-diploma holders who have not continued their high school education in the database is necessary since some of them have entered the post-secondary system. Nevertheless, the total population of interest includes students who may have left the public school system without graduating and who are not considered traditional candidates for post-secondary attendance to the same extent as high school graduates. Fourth, the DAD database monitors only applications for September admission and therefore doesn't include students who may have applied to post-secondary in the January admission cycle. Together, these data stipulations suggest that participation rates are slightly underestimated. The pool of potential candidates (denominator) is purposely broadly defined in order to capture the greatest possible diversity of Albertans who seek out post-secondary education.[50] Conversely, due to the practical limitations on data collection, the number of students actually attending post-secondary institutions (numerator) is underestimated.

10.4 The Complexity of the Post-Secondary Application Process

Application activity is a process that begins when an applicant makes an inquiry to a post-secondary institution regarding admission to a program, and may include some or all of the following: submission of a completed application form for admission to a particular program; payment of an application fee; purchase and submission of high school transcripts directly from the issuing organizations; purchase and submission of post-secondary transcripts directly from the issuing institutions; language proficiency test results if required; letters of reference; portfolio; etc. The completed application is reviewed in terms of the program admission requirements and a decision is made to offer or deny admission. A student who receives an offer of admission may then proceed to register for the program and enroll in courses. However, students may also decline to accept the offer of admission and may or may not inform the post-secondary institution of their decision not to accept the offer.

Often post-secondary institutions will post application information to their student information system as soon as an application form is received. This enables their system to begin generating appropriate correspondence and activate other management procedures, even though some fields on the application form may be incomplete and supporting documents are expected to follow. Until the form is completed and all supporting documentation and fees have been received, the application may not be deemed to be "complete." The operating assumption is that the applicant will carry through and arrange for all documentation to be sent to the post-secondary institution so that an admission decision can be made and an offer of admission (or refusal) extended to the applicant. Some institutional delegates have reported that it is not unusual for an institution's pool of applications to contain approximately one third that are either incomplete or unqualified. The total number of applications in the DAD project includes an undetermined number that were incomplete.

Business practices vary as post-secondary institutions have developed specific business procedures for managing their applications for admission. For example, there are various ways of managing "wait lists" as well as various practices for purging incomplete applications. These variables may make comparisons difficult.

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[50] For further discussion of how the grade 12 cohort is defined in this report see Section 2.1.

In addition, the practice of multiple applications complicates the access picture. *Multiple internal applications* occur when students apply for admission to different programs at the same institution, thereby producing internal duplicate applications. The ACAT office applies a standard procedure and selects the one best occurrence of a unique record identifier at the institution and removes the remaining internal duplicates from that institution's file for the purposes of the study. *Multiple external applications* occur when students apply to programs at different institutions, resulting in multiple applications from a provincial perspective.

In fall 2000, 20,562 grade 12 students submitted 26,075 applications to post-secondary programs in the province. By far the majority of these students (78.5%) submitted only one application. However 17.2 % (N=3,551) of applicants submitted two applications, and 3.5% (N=719) submitted three applications.

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